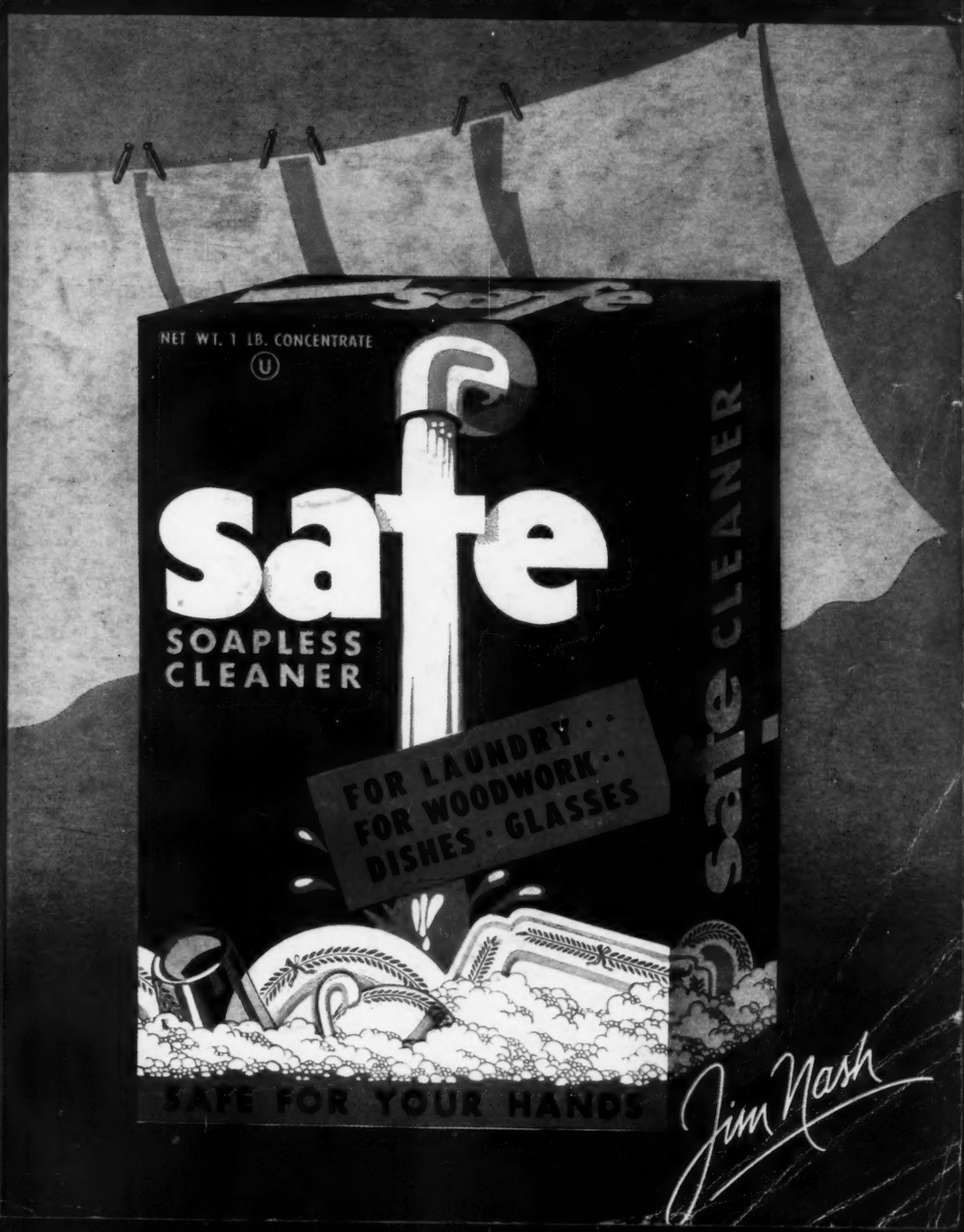
Modern PACKAGING



SEE COVER STORY PAGE 123

H 1947

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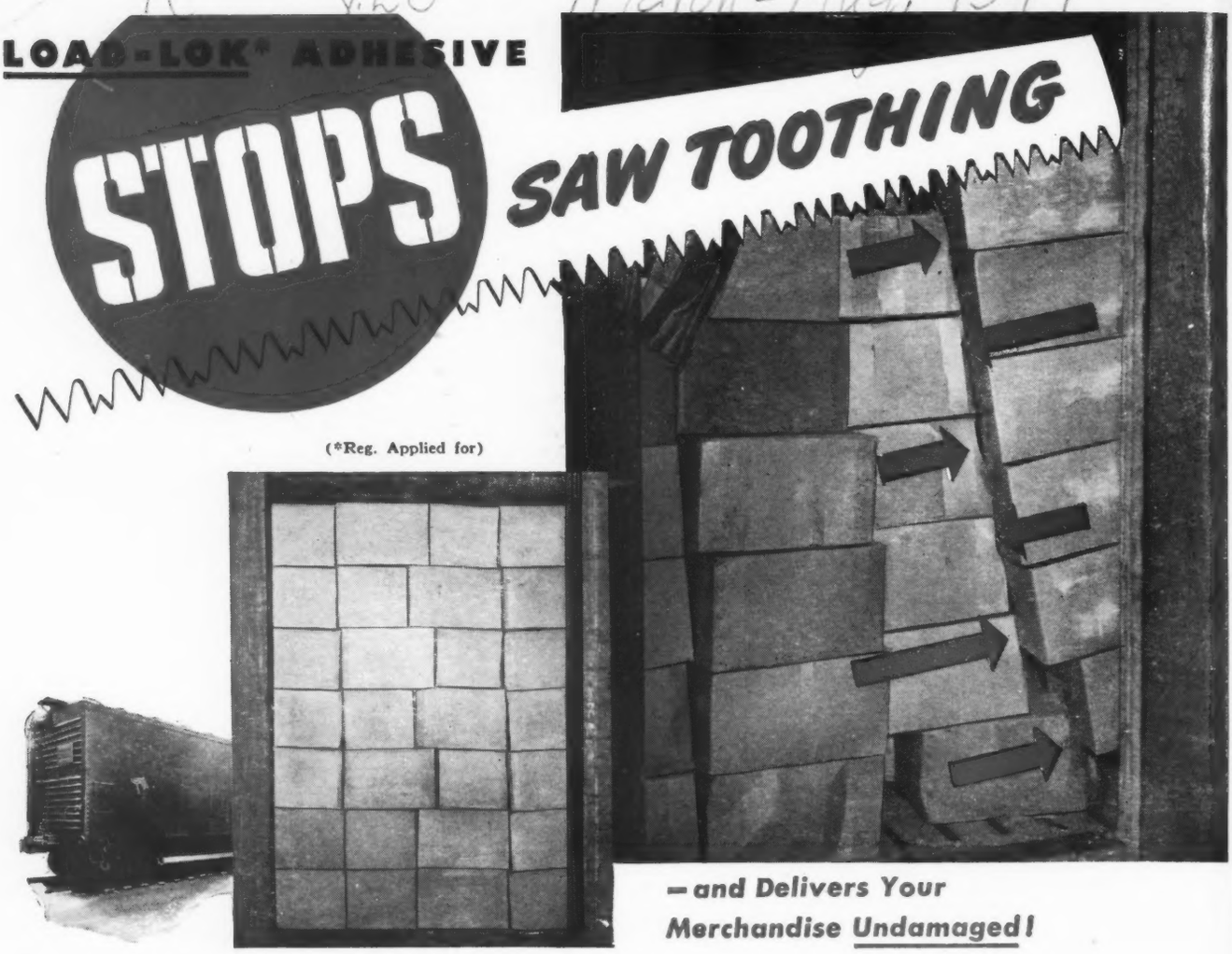
v.202
March-Aug. 1947

LOAD-LOK* ADHESIVE

STOPS SAW TOOTHING

(*Reg. Applied for)



—and Delivers Your Merchandise Undamaged!

Study the *damaged* shipment photo carefully. Note the jagged carton edges. That's saw-toothing . . . caused by subjecting loose, unglued carloads to vertical oscillation, side sway and car movement shocks. Every carton damages another carton. Here's the proof: 1,116 cartons of canned food shipped from Mississippi to Michigan. Result? 1,102 cartons damaged. Shipment rejected at cold storage warehouse because of mold, odor risks.

Next, study the *undamaged* shipment photo. This shipment was properly unitized with LOAD-LOK Adhesive. Contents: 1,524 cartons of bottled brandy. Distance: California to New Jersey. Outturn Report: "No shifting of lading en transit. Entire load in general good order. No exceptions taken on delivery." That means no breakage . . . clean, safe handling merchandise that'll display well, sell well!

LOAD-LOK is a special National adhesive. It *unitizes* the loading of canned goods, light bulbs, china, bottled goods and all other fragile or crushable materials — in cartons, boxes, bags. Carload and truckload shipments are *unitized* into floating *glued* loads that successfully withstand all shipping stresses and greatly reduce dunnage and bracing costs.

LOAD-LOK is automatically applied in two parallel strips to the bottom surface of each shipping unit . . . which is then lifted off the regular loading conveyor and glued into the *unitized* load. LOAD-LOK has a high shear strength which prevents sidewise or lengthwise shifting of the stowed units. Yet, a single sharp upward blow of the hands, against its low tensile strength, releases each unit for easy unloading. The glue cost is insignificant. And the only equipment required is an inexpensive glue pan installation on your loading conveyor.

LOAD-LOK has been endorsed by leading carriers. Full details are available in a new handbook: GLUED LOADS. Write for your copy —NOW! Offices: 270 Madison Ave., New York 16; 3641 So. Washtenaw Ave., Chicago 32; 735 Battery St., San Francisco 11; and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

ARMY NAVY E
Dunellen Plant

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

Tech.

grand opening

IN THE SPRING, if our fancy *lightly* turns to thoughts of . . . er-r-r-r . . . thoughts of easy-to-open packages, it is probably because the Phoenix C T Cap turns *lightly*.

For . . . here is a metal cap designed to spin smoothly on the continuous threads of a glass container . . . to hold securely under rugged shipping conditions . . . to release promptly when tapped lightly on the knurled edge. The Phoenix C T Cap won't back off on frigid cross-country trucks and freight trains, or pop up in overheated storerooms of dealers. And, because it is not readily deformed when removed by the consumer, it may be reapplied as often as required, protecting the flavor or efficacy of the product until it has been completely used.

Opening may well be the most important factor in the selection of a package . . . *opening* and, of course, *resealing*. Consumers are especially conscious of hard-to-open packages. Bent spoons, knicked blades of knives, broken nails, and lacerated fingers are minor tragedies of every kitchen. But, in the opening of a glass package, if the closure is distorted or punctured so that it can no longer serve as a seal, that is adding . . . well . . . adding *inconvenience* to injury.

The vernal equinox, *grand opening* of the year, occurs on March 21—according to our almanac and calendar. Which brings us up to the point we wanted to make in the beginning: The Phoenix C T Cap is *grand* opening (and *grand* resealing) any time of the year!

PHOENIX METAL CAP CO.

2444 W. Sixteenth St., Chicago 8 3720 Fourteenth Ave., Brooklyn 18

Modern PACKAGING

VOLUME 20

NUMBER 7

MARCH 1947

GENERAL

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top-speed WRAPPING AND CARTONING *for the top make single edge blades*

Redington high speed razor blade wrapping machine

Four to five times faster than the first Redington cartoning unit of 1917

The top makers of single edge razor blades look to Redington for top packaging performance in speeding production, lowering costs. They know it's a Redington specialty that goes back 30 years.

That first cartoning machine, turning out 50 cartons a minute, was a vast improvement over hand cartoning. It had a magazine with five divisions in which stacks of wrapped blades were placed. The Redington took one blade from each division, assembled five in the conveyor's pockets, fed carton from a magazine, expanded the carton, inserting 5 blades—then closed the carton by tucking in end flaps.

The 1947 model—Type 23 Continuous Loading Cartoning Machine—*is four to five times faster.* It includes such modern improvements as the short count detector that throws out any stack containing less than the right number . . . *plus* a skip carton mechanism that prevents feeding of cartons when an empty pocket nears filling position.

In order to keep pace with high speed cartoning units, higher speed wrapping machines were needed. Once again Redington went to work. Now the latest Redingtons wrap razor blades at *three times the speed* of the earlier models. The blades, protected by cardboard, are placed in the chute. Cut wrappers are stacked in a magazine . . . the machine feeds blades from chute, feeds wrapper and discharges wrapped blades ready for insertion in magazine of cartoning machine.

Another reason why packaging experts say, whether it's razor blades or toothpaste or any solid item, *"If It's Packaging, Try Redington First."*

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST., CHICAGO 7, ILL.

1897 REDINGTON 1947

FIFTIETH YEAR

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING

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Published the 5th of each month by Modern Packaging Corp. Publication office: Twentieth and Northampton Sts., Easton, Pa. Subscription $5.00 per year in United States; Canadian, $5.50; foreign, $6.00. Two-year subscription: United States, $8.00; Canadian, $9.00; foreign, $10.00. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange by money order or by draft on a New York bank. Price this issue, 50¢ per copy.
Copyright 1947 by Modern Packaging Corp. All rights reserved including the right to reproduce this book or portion thereof in any form.
Printed in U. S. A. Acceptance under the Act of June 5, 1934, at Easton, Pa. Authorized October 7, 1936.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index*.

BIGGER—AND STILL BIGGER

PACKAGING IS not a trade nor an industry—it is a vital activity that cuts a horizontal swath across all of the country's principal industries. It involves design, testing, production, shipping and merchandising. It is a five-billion-dollar business occupying many thousands of persons, few of whom have anything in common except a common interest in packaging.

We who strive to reflect this picture from month to month know how tremendously broad and complex it is. The printed word does not suffice. There is no substitute for an annual gathering to talk over mutual problems and see at one time all that is new in materials, methods and equipment.

The growth of the annual American Management Assn. Packaging Conference and Exposition—from a hotel parlor 17 years ago to America's largest exhibition halls today—is phenomenal, yet understandable in the light of this common interest involving so many phases of the nation's industry and commerce. It parallels the growth of packaging and the growing recognition of its importance in the distribution of merchandise.

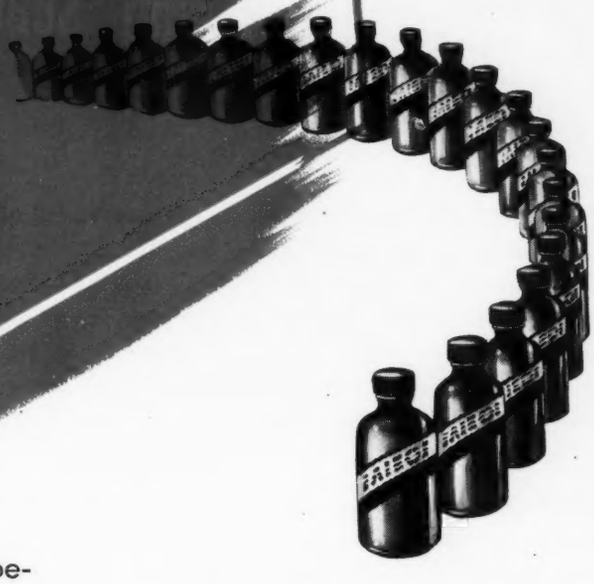
In the tremendous exposition which drew 10,000 registrants to Atlantic City last year it appeared that the packaging show had reached its zenith. But the growth continues. The 1947 show opening in Philadelphia April 8 is 32% larger in exhibit area and will include nearly 200 exhibitors, as against 140 at Atlantic City. There is little doubt that attendance records, toppled year after year, will again be broken.

The show couldn't come at a better time. The relocation of our dislocated economy is not yet complete, but we think all packagers and all suppliers are now aware that 1947 is the critical year—the year in which we will get back substantially to normal competition in merchandising, calling for the best in packaging.

The Editors

Member of Audit Bureau of Circulations

Why spend $1.35 cartoning 1000 bottles . . . when you can do it for 12¢?

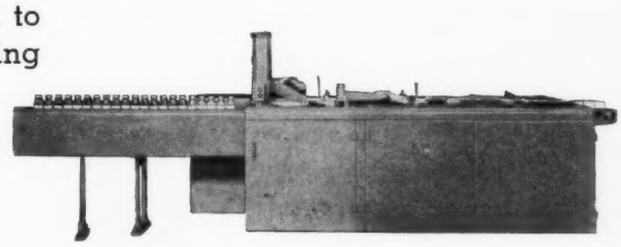


This drastic cost reduction is the actual experience of a leading manufacturer who was hand-loading 2½ oz. bottles into cartons. Daily output was 57,600 loaded cartons. Wage cost for hand-loading amounted to $1.35 per 1000 units.

When a new, high speed Jones Constant Motion Cartoner was installed, daily output jumped to 75,000 units. Loading cost per 1000, including machine depreciation, power, maintenance, and operator wages *was reduced to 12.1¢.* The manufacturer is saving $461.25 per week —and is receiving finished packages far superior to those produced by hand.

Compare Jones Cartoning with YOUR present methods. Compare costs, too. Write today for complete information.

See the Jones Constant Motion Cartoner in action at the Packaging Exposition.



Jones Constant Motion Cartoner

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

New potato chip cartons with sales appeal

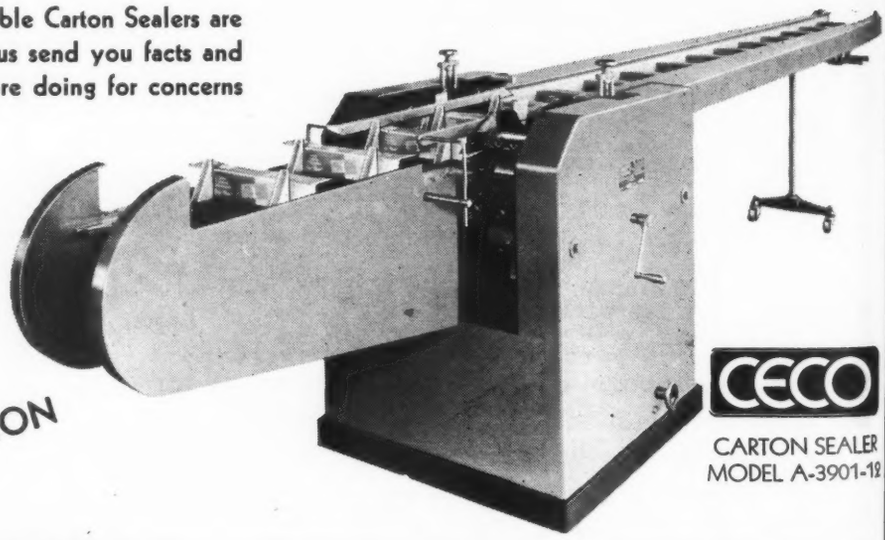
Sealed with CECO Adjustable Carton Sealers

New Era packages in 1½, 5¼ and 12 ounce sizes employ the same design and colors the company previously used for its bags. Colorfully illustrated cartons provide point-of-sale advertising to influence impulse buying. CECO Sealers are adjustable instantly for the three sizes.

The largest exclusive potato chip manufacturer and distributor in the industry, Nicolay-Dancey, Inc., Detroit, Mich., selected the CECO Adjustable Carton Sealer when they inaugurated their new packaging program. Each of their three sizes of colorful new packages provide an attractive point-of-sale display. The new cartons keep chips fresh longer, protect them from breakage, and facilitate storage and handling.

CECO Carton Sealers are adjustable instantly without special tools to seal automatically both ends of any size carton from 3¼" to 12" deep (or larger) at from 30 to 120 per minute. A CECO Sealer not only produces neater, better looking, tamper-proof packages, but saves enough on labor to amortize its unusual low cost, generally within one year.

Deliveries of standard CECO Adjustable Carton Sealers are now available in a few weeks. Let us send you facts and figures showing what CECO Sealers are doing for concerns in your line.



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Packaging Machinery Specialists

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Saddle and gear by All Western Plastics Co., Alliance, Neb.

COWBOY'S DELIGHT

Working saddle and gear suggest interesting packaging applications for GEON raw materials

IT isn't really such a far cry from the plastic saddle shown here to packaging materials for a wide variety of uses.

That's because the saddle has many of the properties that can be had in coated or impregnated papers, boards, fabrics or unsupported films made with or from GEON polyvinyl materials.

Chief among these are resistances to foods, chemicals, oils, greases, acids, alkalis, water, sunlight, aging, abrasion, heat, cold and most other normally destructive factors. Finished products made from GEON may be brilliantly or delicately colored — clear or opaque.

While we make no finished products from GEON we will be glad to work with you on any special packaging applications. For more information please write Department S-2, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

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Polyvinyl Materials
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First, in every field, with new, improved, convenient packages—are those wise manufacturers who selected Milprint's wide experience and facilities to develop new sales for their product thru better packaging.

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SALES OFFICES IN ALL PRINCIPAL CITIES

THE IMPORTANCE OF LITTLE THINGS

The Telescope was a development of Jan Lipperchy of Middleburg, Holland in 1608 A.D. Like many great discoveries it was by accident. It was his apprentice who while examining a lense, focused it on a distant church steeple and noticed that the steeple seemed closer and larger.

While the telescope today is mechanically the same, it is infinitely improved. Modern machining and lense grinding makes the difference.

ADHESIVES too must have been an ancient discovery and we know that their present day success is no accident.

BINGHAM'S STAR BRAND BOTTLE LABELING GLUE is an example of modern achievement. It is designed to "MAKE YOUR IDENTITY STICK." It is designed to operate in every type of mechanical labeling process. STAR CASE SEALING, CARTON SEALING, and other STAR BRAND packaging adhesives have been designed with a purpose—to "MAKE YOUR IDENTITY STICK" and to "DELIVER THE GOODS."

BINGHAM BROTHERS COMPANY

Main Office 406 Pearl St., New York 7

Baltimore, Md • Newark, N. J. • Rochester, N. Y. • Philadelphia, Pa.

The case that goes back for more is paperboard glued with

URAC RESIN 180

Today, manufacturers can save money and trouble by using paperboard boxes for reshippers.

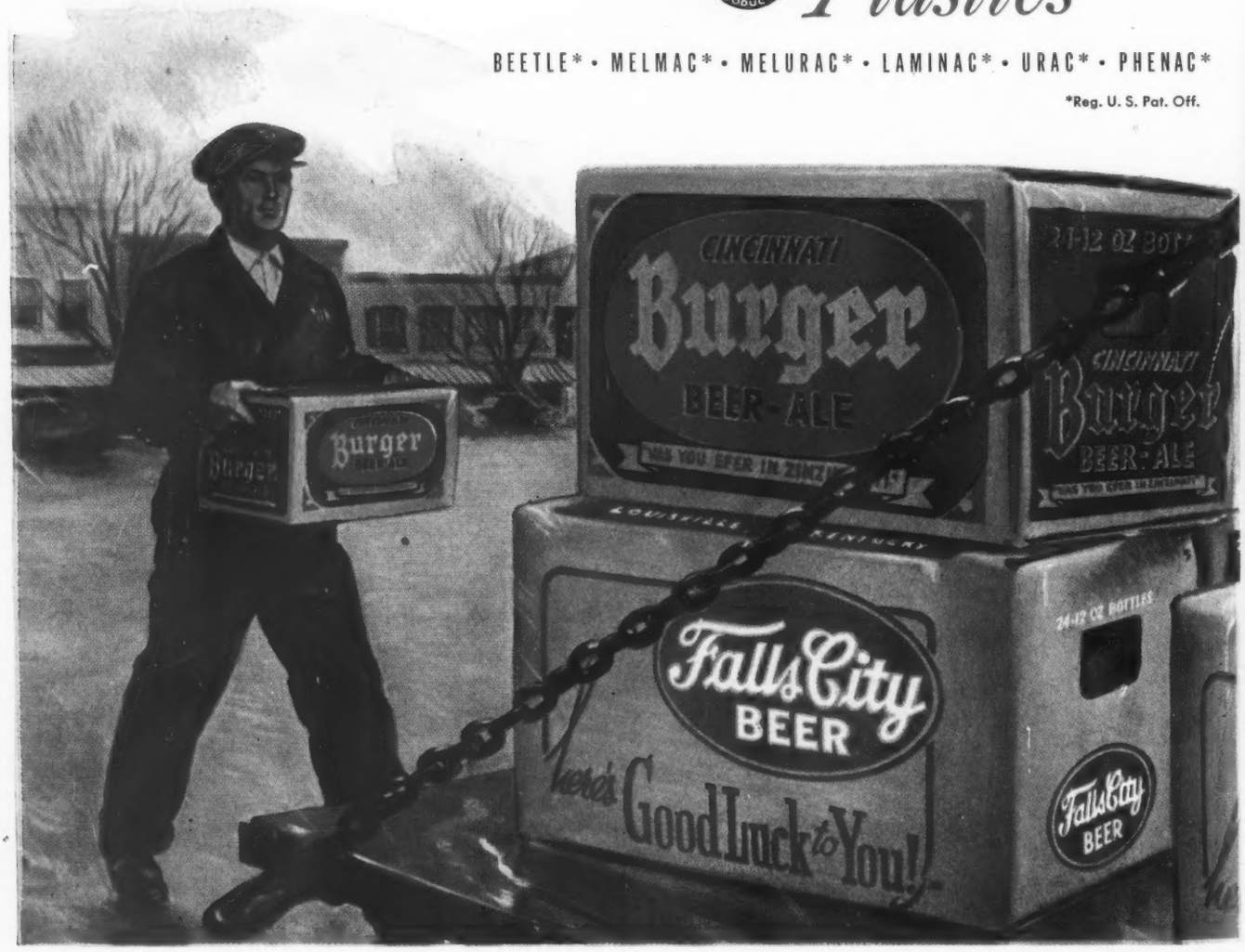
In the first place, corrugated containers, glued with resin-starch adhesives incorporating Cyanamid's URAC* resin 180, cost less than wooden cases. Secondly, they can stand rough handling since they have enough resiliency to "give" rather than break under impact. Besides all this, they're lighter in weight than wood, thereby cutting shipping costs. The bond which holds containers together is water-resistant and won't deteriorate when exposed to dampness during storage or in transit.

All types of water-resistant corrugated containers, solid fiber containers, spirally and convolutely wound tubes for packaging and shipping can be glued successfully with adhesives using URAC resin 180 in conventional starch pastes. Contact your box supplier or paper mill direct, or write Plastics Division, American Cyanamid Company, 34B Rockefeller Plaza, New York 20, N. Y.

Cyanamid Plastics

BEETLE* • MELMAC* • MELURAC* • LAMINAC* • URAC* • PHENAC*

*Reg. U. S. Pat. Off.



WE NOMINATE

For An All-Time Great In Packaging Progress

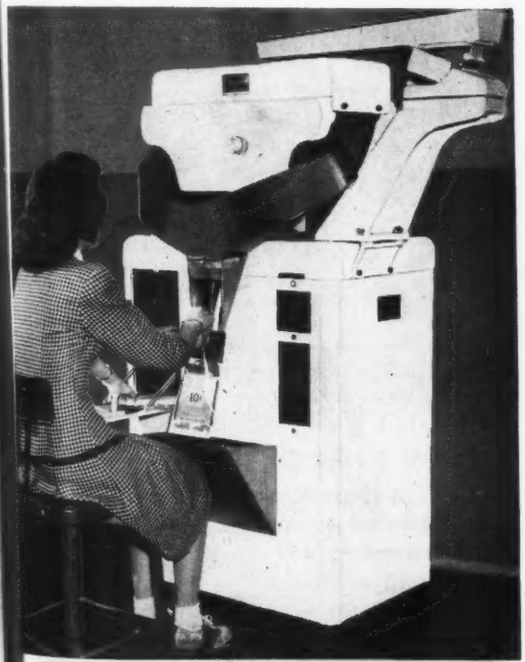
HY·TRA·LEC

a *new* method of automatic weighing at pre-determined net weights. Based on the principle of positive displacement.

No spring or beam scales. No fulcrum point.

Provides a degree of accuracy at high speeds previously believed unattainable with a single weighing unit.

Dry Product Packagers, Please Note



Hy-Tra-Lec is new. The first commercial machine was installed last year. Forty leading manufacturers are now using it . . . and the list is growing every month. From potato chips to rubber bands . . . if you package a dry product and desire accurate, high speed weighing investigate Hy-Tra-Lec.

WRIGHT'S Automatic Machinery Company

SALES-SERVICE OFFICES:

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MAIL THIS COUPON TODAY FOR FREE TEST DATA

Wright's Automatic Machinery Co.
Durham, North Carolina

Gentlemen:

Please send me literature and FREE test data on your new Hy-Tra-Lec Automatic Weigher.

Name _____ Position _____

Company Name _____

Company Address _____

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OF HEAT SEALING

Combines all the advantages of both JAW and ROTARY . . . A new principle . . . Ideal for continuous heat sealing of all homogenous films such as: Pliofilm, Polyethylene, Saran, Vinyl, etc. . . . as well as all LAMINATED and COATED materials . . .

This method heat seals and COOLS almost simultaneously . . . Makes for efficiency of production work . . . There is NO DELAMINATION when sealing laminated or coated material . . . NO DISTORTION OR MARRING of film or printed surfaces . . .

THE BROADWAY

Overlap seal for makers of:
Shower Curtains, Drapes, Aprons, etc.
Table cloths or covers.
Sheet material where one or more rolls are to be combined.

See exhibit Booth 523-4 Packaging Exposition

THE STANDARD

Fin-type seal for packers or manufacturers:
Sealing tops or bottoms of extruded tubes.
Using paper bags with heat sealing lips.
Sealing any thermoplastic material.

We are pleased to announce our appointment as Eastern Representatives for

STANLEY PRODUCT IDENTIFICATIONS

LABELS and NAME PLATES
Embossed brass and aluminum.
Multicolored on gold and silver foil.

PACKAGING MATERIALS
Gravure printing for labels, overwraps, bags, etc., on cellophane, acetate or foils.

Also see page 227

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FOIL CARTONS

FOIL CARTONS

REFLECT LIGHT
ATTRACT ATTENTION
PROTECT CONTENTS

SELL YOUR PRODUCT FASTER

Your product in Foil Cartons has its own spotlight. Foil reflects more light, draws more attention, sells products faster. That is why dealers prefer Foil Cartons. That is why more and more manufacturers use this powerful selling tool. Ask United how you can profit from the high display value of Foil Cartons—how Foil Cartons can work for you as silent yet eloquent salesmen in store windows, shelves and counters.

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FROM PULP TO PACKAGE

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H. RIDGELO CLAY COATED BOXBOARD
LAY COATED BOXBOARD * CUSTOM-MA

Ridgelo
CLAY COATED
BOXBOARDS

the *custom-made boxboard improved for packaging today!

From the early days of folding boxes
the finest carton material has been
Ridgelo Clay Coated Boxboard.
New printing skills
make uniform smoothness, brightness and cleanness even more important now.
No other surface matches clay coated.
It is suited perfectly to the process, the inks, the design, colors and the finish
whether varnish, brush or plain.
Leadership for your packaging with
Ridgelo Clay Coated means only a little extra cost.
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cartons of Ridgelo.

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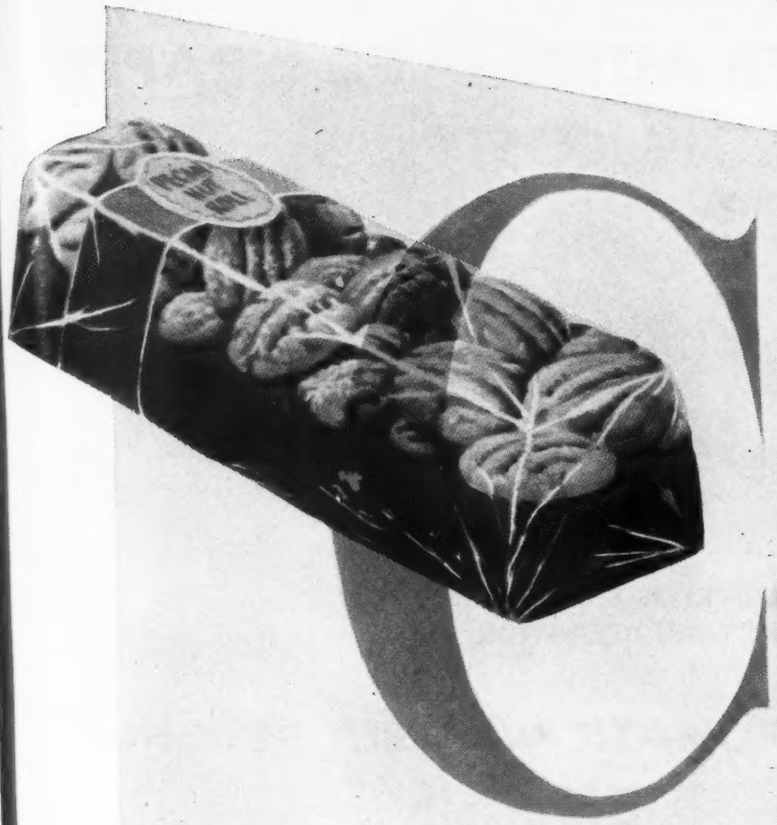


C is for Candy

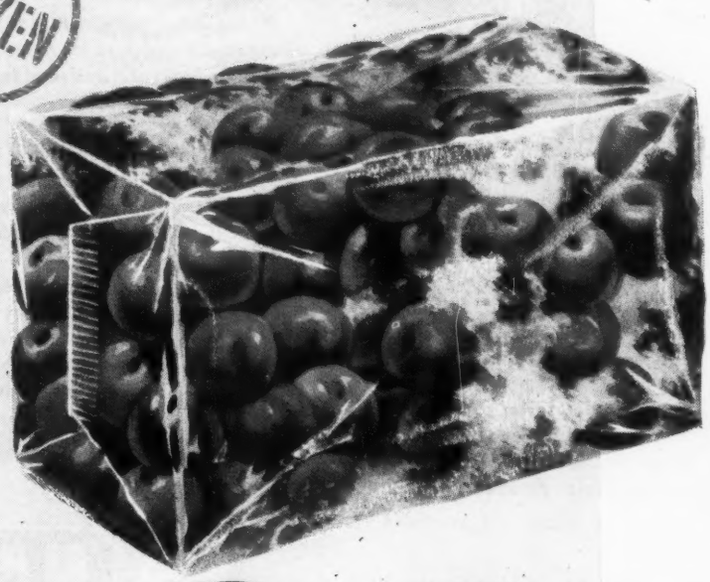
FRESH

GOOD NEWS FOR CANDY MANUFACTURERS — bar and box candies now keep at fresh-made peak of tastiness when flavor-sealed in PLIOFILM — the only transparent wrapping that provides three-way protection against air, moisture, liquids. PLIOFILM locks in natural moisture, seals out staling air. That's why it's the perfect protection for candies, cheese, cigars and everything choice.

and for Cherries

FROZEN

A TIP ON FROZEN FOODS — cherries and other fruits can be quick-frozen in their own syrup without fear of leakage — in PLIOFILM — because it heat-seals liquid-tight and doesn't crack or split at sub-zero temperatures. It is truly moistureproof, prevents dehydration and "freezer burn" — keeps natural flavor and color in fruits, meats and all succulent foods.



Everything is better in Pliofilm

3-way protection against air, moisture, liquids

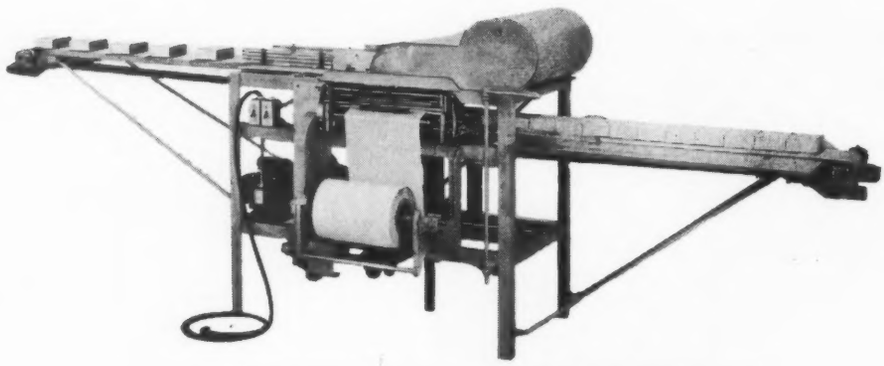
THE ANSWER TO PACKAGING PROBLEMS FROM A TO Z — whether you're packaging aspirin, zwieback or any moisture-sensitive product, you'll benefit by PLIOFILM's three-fold protection against air, moisture, liquids. For information, write: Goodyear, Chemical Products Division, Pliofilm Dept., Akron 16, Ohio

GOODYEAR

THE GREATEST NAME IN RUBBER

Pliofilm—T.M. The Goodyear Tire & Rubber Company

NOW! A HIGH SPEED AUTOMATIC WRAPPER AT LOW COST!



KNAPP-WRAPP MODEL-JS SIDE PAPER FEED STRAIGHT-THRU OPERATION

Other Models:

Model KW end paper feed design; Speed 50 or more per minute, package entrance and outlet at same station for one operator efficiency. Available now.

Model SA semi - Automatic Folder Sealer, operation by foot or hand lever, capacity up to 1000 packages per hour. Available now.

Model FS Semi - automatic bench model folder sealer for minimum production needs. Same perfection folding mechanism on all models. Available now!

HANDLES CARTONS

MINIMUM
3/8" high x 1 3/8" wide x 1 3/8" long

MAXIMUM
4 3/8" high x 6" wide x 12" long

Equipped with 1/2 H.P. Motor, 110 or 220 volts. Send samples with request for additional information. Available on reasonable delivery, right now!

AN AUTOMATIC WRAPPER DESIGNED Especially FOR CARTONS AND BOATS!

A wrapping machine that is superior in quality of work performance because it is especially designed for wrapping cartons—it is not an improvised Bread Wrapper—it is engineered and designed from the ground up to do a better carton wrapping job at lower cost.

It is light in weight, yet sturdy in construction; free of vibration positive chain package feed; positive thermostat heat control; furnished with or without electric eye; mounted on castors at added cost; easy to move; it's simplicity of design is gadget free; a machine built to do one job continuously with perfection.

Knapp-Wrapp Machines have a production speed that is unequalled in their price field. Handles Cellophane—Wax Paper—Heat sealing Foil—and other heat sealing wrapping materials, printed or plain.

KNAPP-WRAPP
DON'T JUST WRAP-"KNAPP WRAPP"

MANUFACTURED BY
KNAPP MANUFACTURING CO., LOS ANGELES 41, CALIF.

NATIONAL DISTRIBUTOR
PETER D. BOWLEY & ASSOCIATES
210 MISSISSIPPI ST., SAN FRANCISCO, CALIFORNIA

Valenciennes Lace . . . Kupfer's exclusive distinctively feminine foil paper adds that ever-so dainty touch that appeals universally to all women. Embossed in plain, gold, silver or color combinations, this paper is most effective for candy, cosmetic, and accessory box coverings.

Numerous other Kupfer papers such as foil and metallic papers, lace patterns, leather simulations, floral prints, trade-marked papers and over 5000 other papers are available to make your package outstanding on shelf and counter.

WRITE FOR SAMPLES TODAY.

COLOR SELLS

KUPFER BROS. CO.
4 ASTOR PL., NEW YORK 3, N.Y.

Manufacturers of Surface Coated Papers Since 1845

KUPFER BROS. PAPER CO.
145 West Hubbard Street
Chicago 10
Illinois

Southwest Representatives:
MODERN PACKAGINGS
Irwin-Keasler Building
Dallas 1, Texas

FRYE PAPER COMPANY
1510 Santa Fe Avenue
Los Angeles 21
California

Branches in:
BOSTON • RICHMOND
PHILADELPHIA
SEATTLE

DETROIT PUBLIC LIBRARY

Soft Drinks or Bearings...

DOUBLE DUTY . . . with Wax-laminated Kraft! Flavor and freshness are retained and moisture absorption prevented in this specially designed liner bag for soft drink powders, while below:

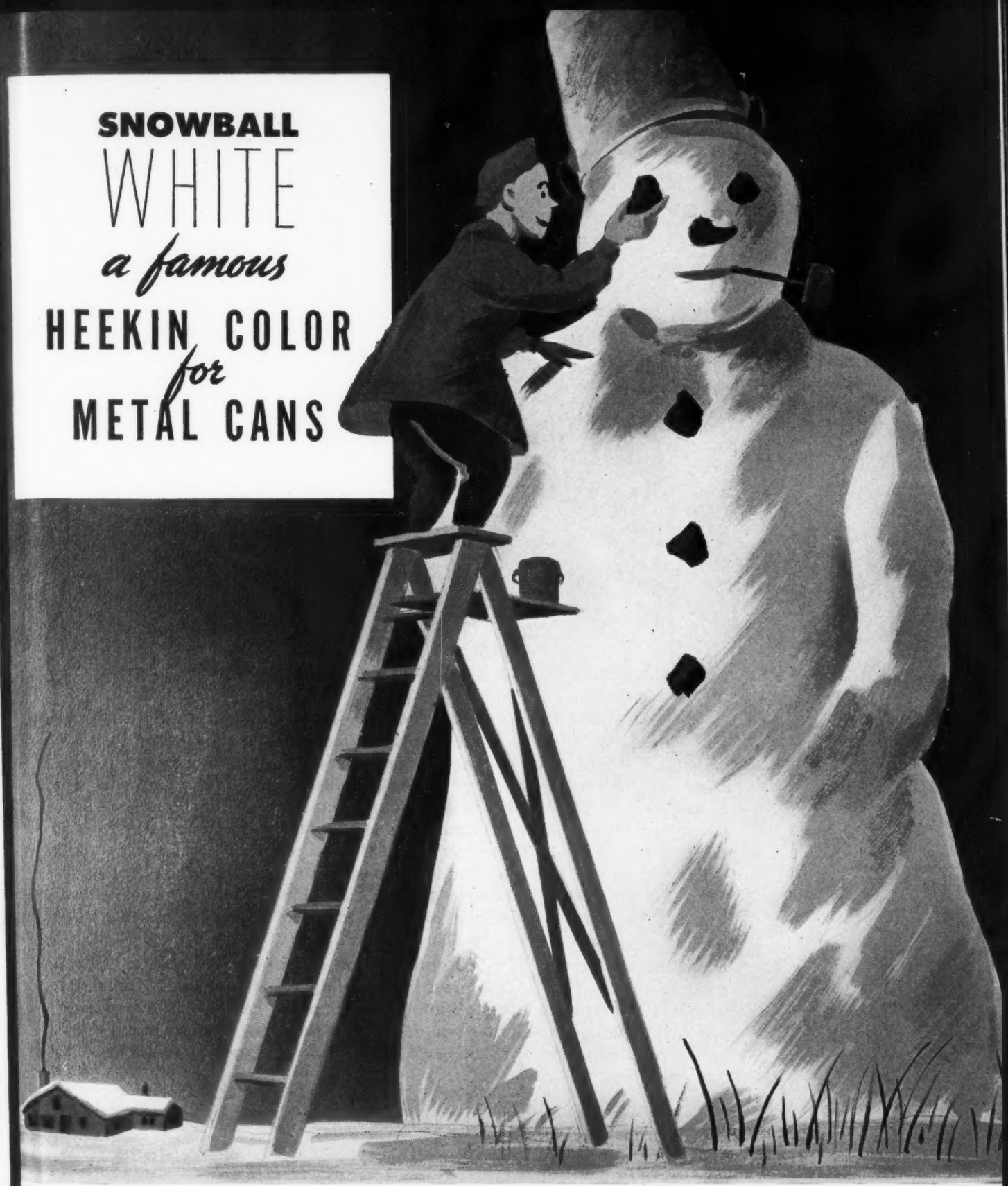
Wax-laminated Kraft prevents rust and corrosion from forming and collecting on bearings, tools and machine parts.

THILCO PROVIDES THE PROTECTION THAT COUNTS!

Whether your problem is one of preserving flavor and freshness — or safeguarding against rust and corrosion, there's a Thilco *Functional* paper designed to do the job . . . and do it better! Solving packaging problems for better protection is an everyday practice with us. Our complete line of MG Krafts and Greaseproofs, Asphalt waterproof papers, Waxed thermo-plastics, and Custom-designed Bags lend themselves to such a wide range of varied and multiple uses that most any specific requirement is readily met. In addition, we decorate and print these papers for identification and eye-appeal . . . all within our own mill.

THILCO *Functional* PAPERS

THILMANY
PULP & PAPER COMPANY
KAUKAUNA · WISCONSIN



HEEKIN CANS

With Harmonized Colors

THE HEEKIN CAN COMPANY, CINCINNATI, O.

FINER LITHOGRAPHED CANS OF METAL SINCE 1901

SEE US AT THE SHOW . . .

WITH

our new machine

We're bringing our new Model TM Automatic Tablet Bottling Machine to the Packaging Show, April 8-11 in Philadelphia, because we want you to see the most modern development in tablet bottling machines.

The new Model TM is a unique machine in that it requires only one operator, whose only job is to place empty bottles on the feeding table of the machine. From that point the bottles are automatically fed into the machine, filled with an accurate count of tablets and discharged onto a conveyor which moves them to the next operation. The entire machine is functionally designed to insure foolproof, fast operation. The feeding trays are segmented for easy, exact bottle loading, while tablet counting is a purely mechanical function which cannot err. The new Model TM is versatile and will handle bottles from 1" to 2¼" in diameter that are up to 5" in height, requiring tablet counts of from 12 to 300. Production is pleasing too. The TM will deliver up to 120 bottles per minute.

We'll be in Booths 509-510 and we look forward to seeing you. Come in and see us, whether your interest lies in filling tablets, powders, granulated products or other dry materials into bottles, cans or cartons, or in forming paper cartons or boxes—but if you don't make the show, and you have a packaging problem, send it to US—we'll be glad to suggest a solution, without obligation.

US *Automatic Box Machinery Co. Inc.*

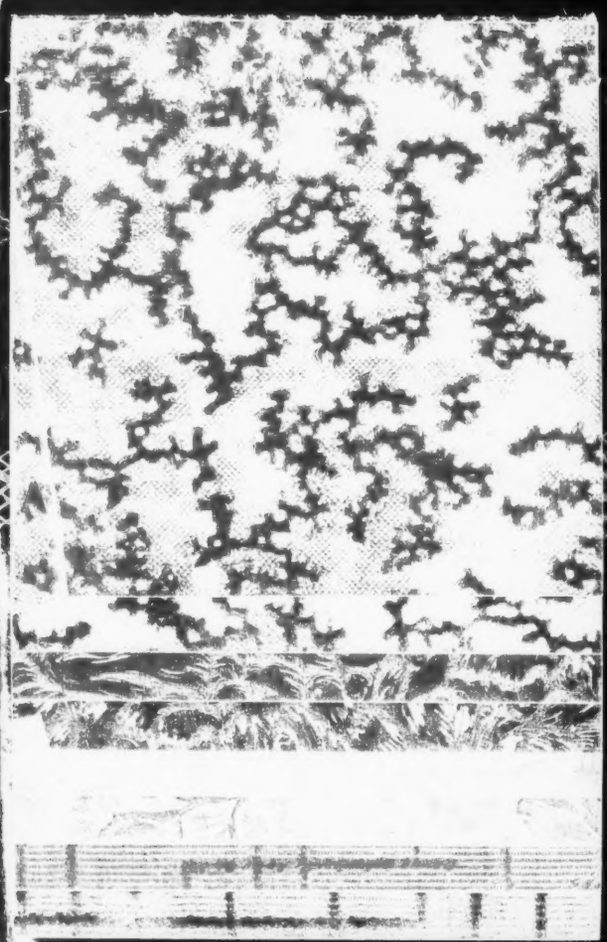
Owning and Operating

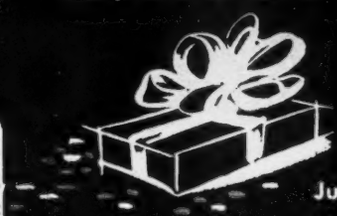
NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

Here are Package Wrap Ideas worth more than Gold or Silver!





Just a gold or silver wrap is not enough to make your package stand out these days. You want design ideas and distinctive patterns that are ahead of the trend—to give your package a sales-appeal "edge" over competition! Look at the swatch at the left. Let the distinguished appearance of wraps like these earn profits for you. Write today for full details.

CORAL GOLD

CORAL SILVER

SABLE GOLD

SABLE SILVER

WILD ROSE GOLD

WILD ROSE SILVER

SHANTUNG GOLD

SHANTUNG SILVER

Nashua Gummed and Coated Paper Company

NASHUA
MAKES PAPER MAKE MONEY FOR YOU

NASHUA, NEW HAMPSHIRE

GOOD NEWS SHOULD TRAVEL FAST....

mrm now makes it practical for all manufacturers to own a fully automatic rotary filler, made with **mrm** simplicity and efficiency. All will welcome this versatile machine because 1) It is fully automatic in operation, 2) It fills varied liquids, container types, and sizes, 3) It is economical in cost, operation, maintenance. It pays for itself!

the NEW mrm

FULLY AUTOMATIC

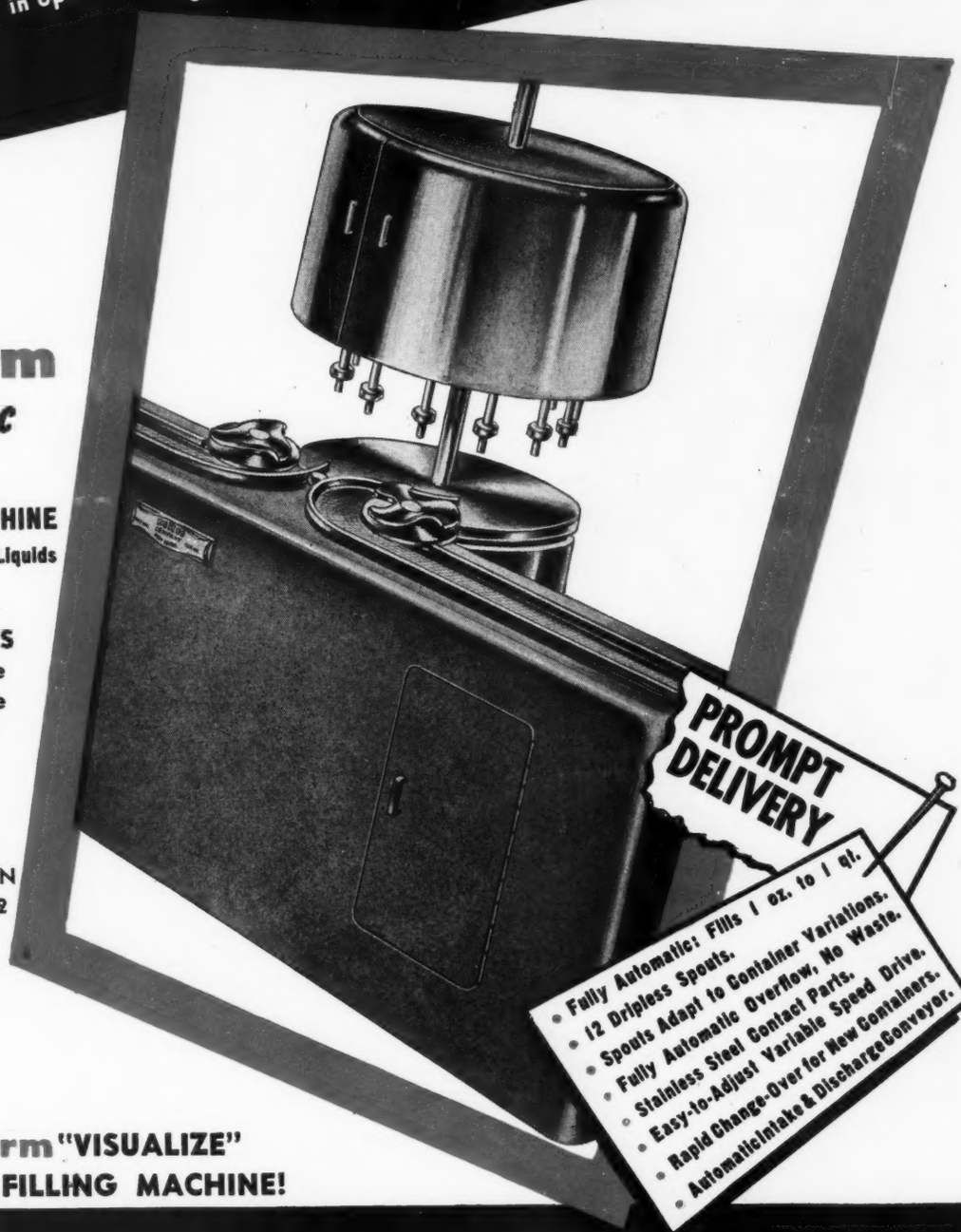
ROTARY

VACUUM FILLING MACHINE

Fills • Thin • Foamy • Viscous Liquids

OPERATING SPEEDS
60 quarts per minute
80 pints per minute
(smaller containers with proportionate increases in speed)

SEE US AT THE
PACKAGING EXPOSITION
April 8-11, Booths 621-622
PHILADELPHIA'S
COMMERCIAL MUSEUM


PROMPT DELIVERY
• Fully Automatic: Fills 1 oz. to 1 qt.
• 12 Dripless Spouts.
• Spouts Adapt to Container Variations.
• Fully Automatic Overflow, No Waste.
• Stainless Steel Contact Parts.
• Easy-to-Adjust Variable Speed Drive.
• Rapid Change-Over for New Containers.
• Automatic Intake & Discharge Conveyor.

LET mrm "VISUALIZE" YOUR FILLING MACHINE!

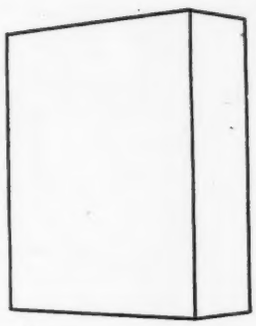
mrm co., inc.

CUSTOM DESIGNED AND BUILT FILLERS AND CONVEYORS

191-193 BERRY ST. • BROOKLYN 11 NEW YORK • EVergreen 7-3936

MORE EYES

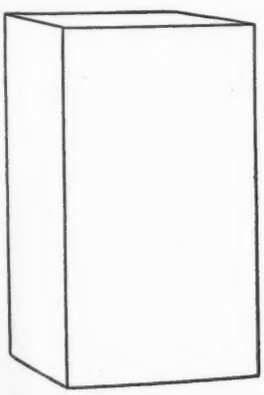
Whiter. Brighter. Takes inks brilliantly. Coated Lithwite's smooth chalk-free surface takes plate impressions uniformly, brings up colors vividly. Rub-resisting. Fade-resisting. Easier to glue. Performance-proved for 8 years.



ES REACH FOR YOUR PRODUCT IN

CARTONS OF COATED LITHWITE*

...THE QUALITY CLAY-COATED PAPERBOARD



For a more "eye-tractive" package that gets the breaks in today's modern stores, many leading mass merchandisers have turned to cartons of *Coated* Lithwite. Good reason! For *Coated* Lithwite is the quality *clay-coated* paperboard that makes the upgrading of packages *practical* for mass producers. Made in one straight-through operation . . . quality-guarded by exacting controls . . . *Coated* Lithwite has a durable whiteness, a crispness, a richness and brilliance that mean extra display appeal. *Coated* Lithwite has been *performance-proved* for 8 straight years. While production is currently sold up, why not investigate, *now*, how *Coated* Lithwite and Gardner-Richardson carton craftsmanship can team together to make more eyes reach for *your* product?

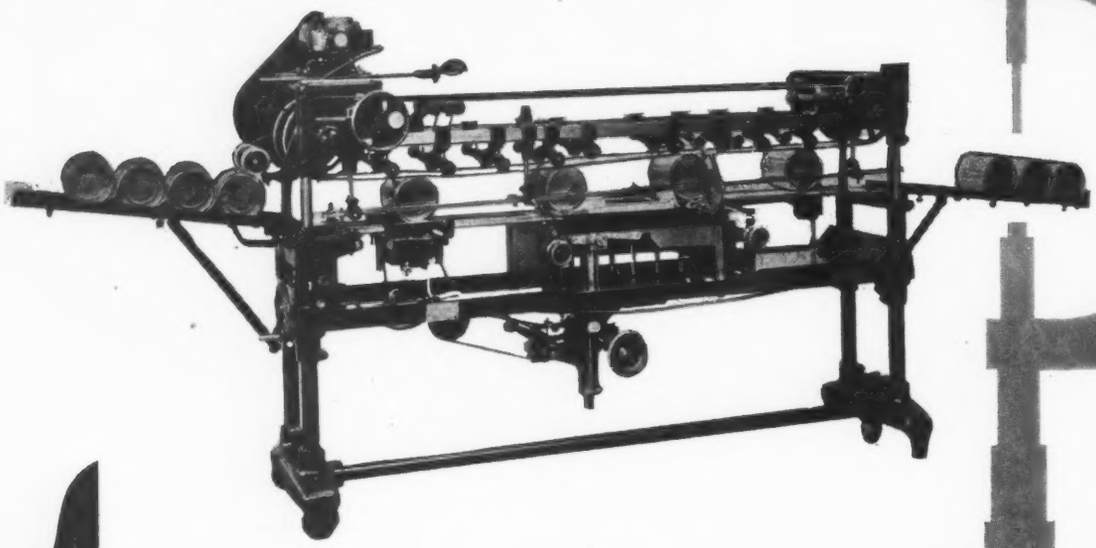
A product of THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

*Reg.U.S.Pat.Off.

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis.

Standard-Knapp Labeler



STANDARD-KNAPP'S DESIGN FOR BUILDING

Standard-Knapp's engineers design packaging machinery with an eye to sound building—sturdy and precise construction. To make sure that Standard-Knapp machines do not waste power or time in performing their operations, our engineers experiment only on the drawing board. When we build it is with the assurance of knowledge based on long experience.

We are essentially package machinery development engineers. Not only are our standard, proved bag packers, case sealers, labellers and bottle packers well-known in most high production packaging industries, but our flair for innovation in packaging equipment is known and relied on too.

The special machines which we develop for specialized industries and the new machines we design on occasion to handle new packaging operations are known to be top standard for quality.

Efficiency, economy, long life, automatic operation—all add up to Standard-Knapp's design for building.

Standard-Knapp Corporation

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue, NEW YORK 22, N. Y.
221 North La Salle St., CHICAGO 1, ILL.
145 Public Square, CLEVELAND 14, OHIO
300 Seventh Street, SAN FRANCISCO 3, CALIF.
420 S. San Pedro Street, LOS ANGELES 13, CALIF.
2615 Western Avenue, SEATTLE 99, WASH.
1204 S. W. Yamhill Street, PORTLAND 5, OREGON
349-350 Paul Brown Bldg., ST. LOUIS 1, MO.
6 Radcliffe Rd., ALLSTON 34 (Boston), Mass.
Windsor House, Victoria St., LONDON S. W. 1, ENG.
Orlando, Fla.

ROLBALL
TRANSPARENT PLASTIC PACKAGING
by Arnrus . . . . . .
INCREASES THE RATE OF
RETAIL TURNOVER . . .
National
Transparent
Plastics Co.
SPRINGFIELD, MASSACHUSETTS.

KALHESIVE* SEALING

makes moisture-proof bags at RECORD SPEED!

*Patent Pending

Kono-Mead's Kalhesive* method of heat and glue sealing insures positive moisture-proofness and dependable strength—while permitting record-breaking high-speed production under continuous rotary action. Machines now ready for delivery—Send for catalog!

KONO-MEAD EQUIPMENT CORPORATION
133-23 35TH AVENUE, FLUSHING, LONG ISLAND, N. Y.
Telephone: FLushing 3-8113

Kono-Mead

HIGH-SPEED ROTO Bag-Making Machines

On Display at

PACKAGING EXPOSITION

•

Philadelphia
April 8—11
Booths 47—48

MEAD
papers
ESTABLISHED 1846

WHAT DOESN'T HE KNOW ABOUT BREAKING AND ENTERING?

The Mead Paper Man, who is the modern research laboratory of the Mead New Products Division, lives in close contact with many of the sinister characters which bedevil your product . . . heat, cold, humidity, vapors, gases, greases. He has studied their habits, the better to frustrate them. Even as the immortal Sherlock Holmes missed now and then, so the Mead Paper Man occasionally runs across a tough packaging problem which stumps him. But not one that can be licked by functional paper, be assured of that.

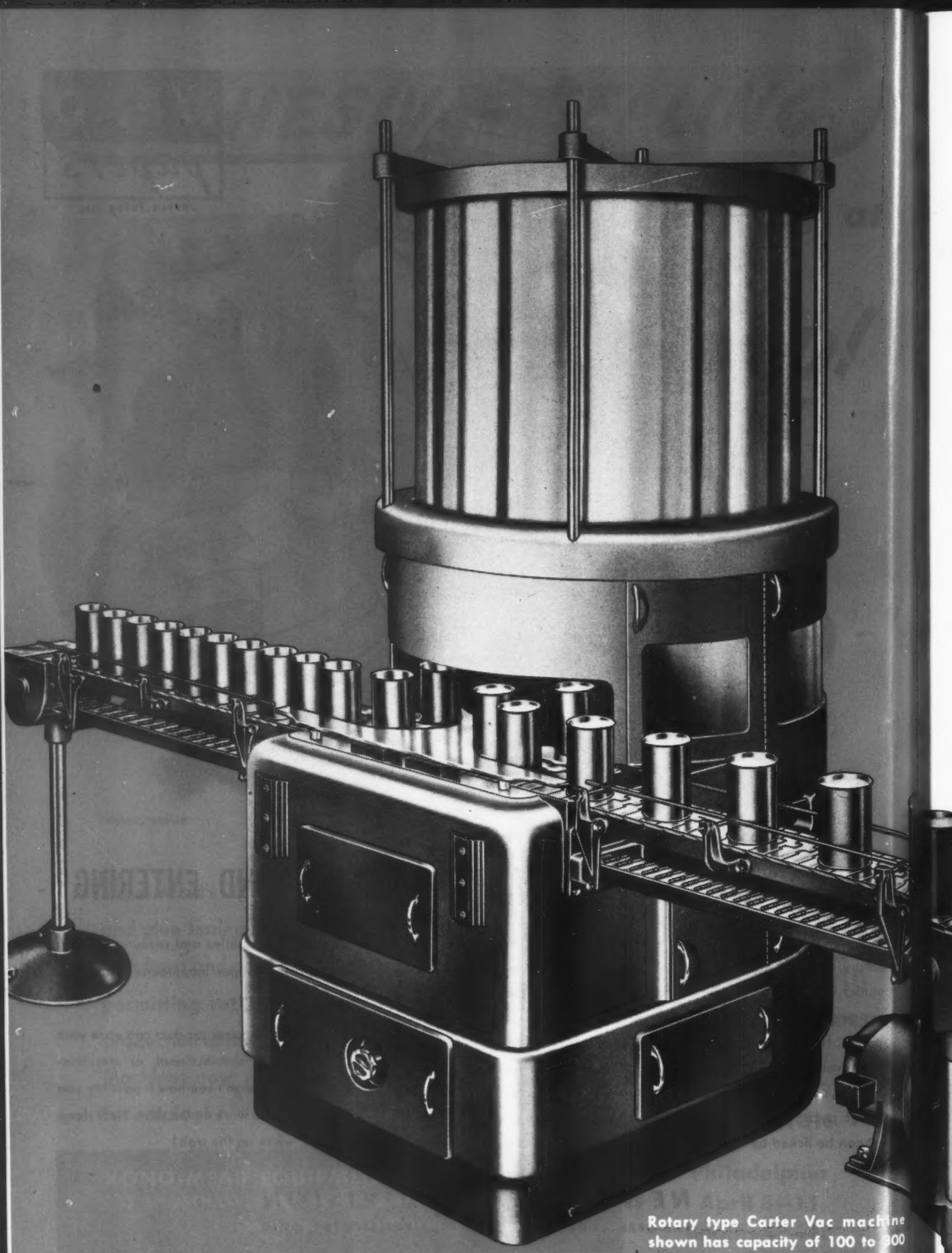
He has behind him the full facilities and resources of one of America's most versatile paper manufacturers, now in its second century of experience.

If you think that a specialized paper product can ease your manufacturing, warehousing, distributional, or merchandising grief — or even if you don't see how it possibly can — set the Mead Paper Man to work on the case. He'll sleep not, neither will he eat, while on the trail!

NEW PRODUCTS DIVISION

THE MEAD CORPORATION **CHILLICOTHE, OHIO**

SALES OFFICES: THE MEAD SALES COMPANY, 230 PARK AVE., NEW YORK 17 • 131 N. LUDLOW ST., DAYTON 2 • 111 W. WASHINGTON ST., CHICAGO 2



Rotary type Carter Vac machine shown has capacity of 100 to 300 one pound containers per minute.

General Mills now exclusive manufacturer of Carter Vac filling machinery

The Mechanical Division of General Mills now offers a completely re-engineered line of Carter Vac Fillers for vacuum process filling of non-freeflowing powdered materials.

These new models have been improved in speed, durability and versatility. Parts and specifications have been standardized and all working parts are completely dust-sealed.

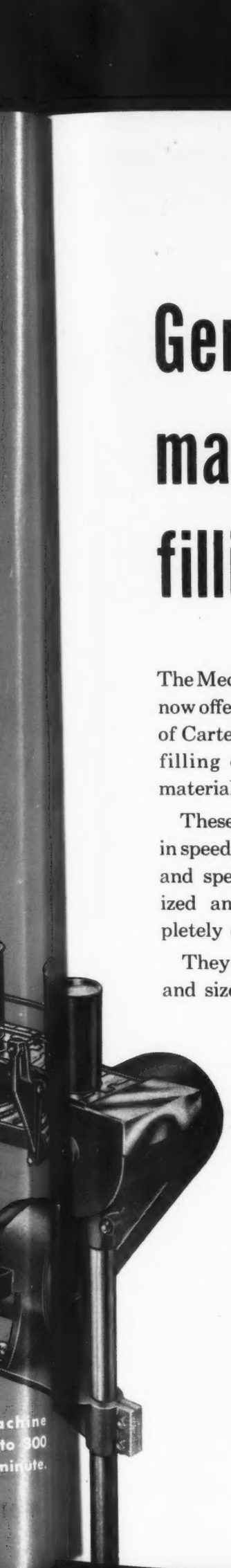
They're available in a variety of types and sizes which can be adapted to any style or shape of rigid or semi-rigid containers in sizes from ounces to barrels.

The unique vacuum filling principle of the General Mills Carter Vac Filler insures uniform weight, controlled density, easy handling, fast, dust-free filling of powdered products.

☆ ☆ ☆

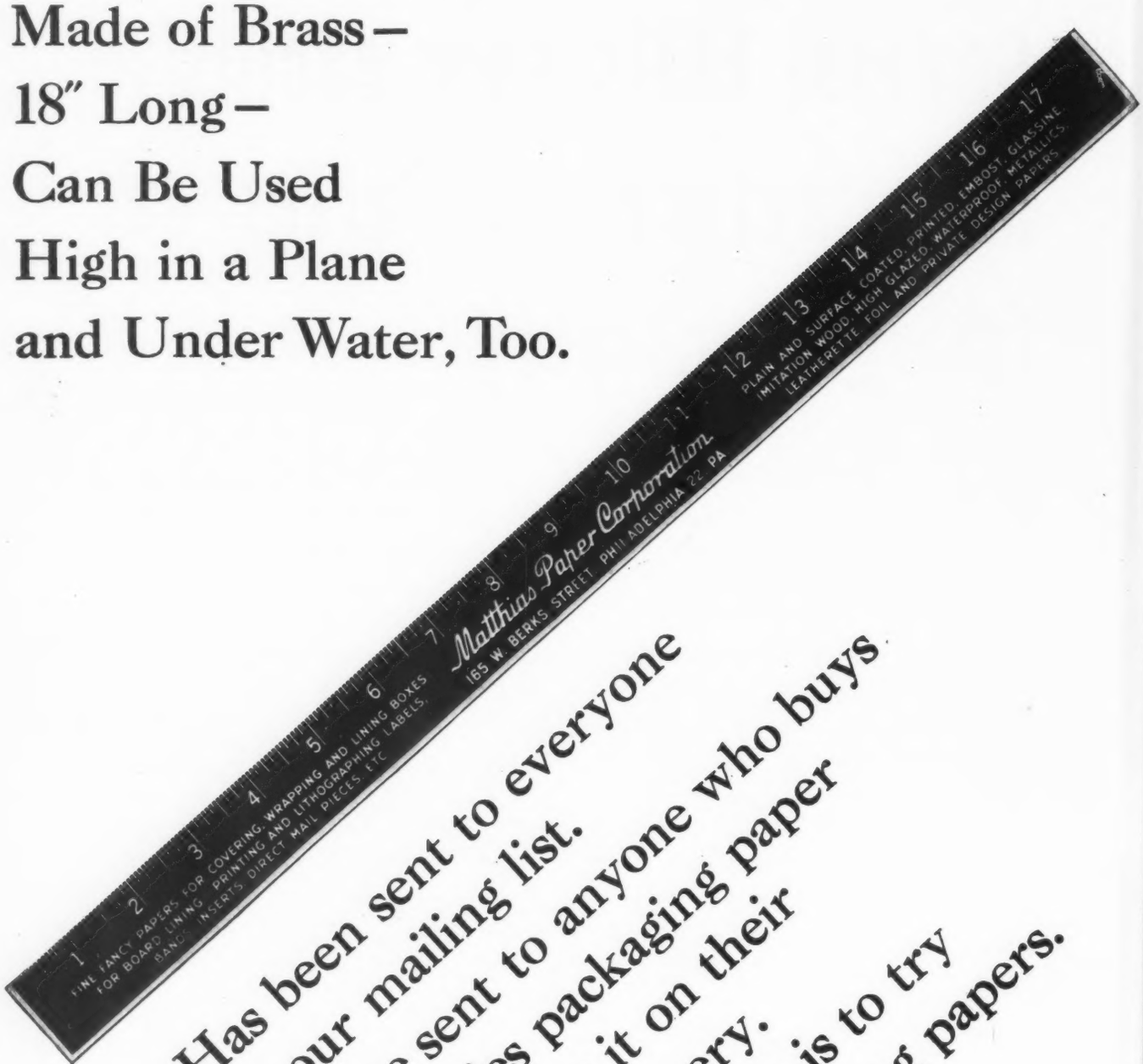
Write to us for specific information on how General Mills Carter Vac Fillers can speed and simplify your own filling processes.

Going to the AMERICAN PACKAGING EXPOSITION April 8 to 11? Be sure to see the latest General Mills Carter Vac Fillers at booths 618, 619, 620.



Mechanical Division
General Mills, Inc.
1620 CENTRAL AVE. • MINNEAPOLIS 13, MINN.

This is the Rule–
Made of Brass–
18″ Long–
Can Be Used
High in a Plane
and Under Water, Too.



Has been sent to everyone
on our mailing list.
Will be sent to anyone who buys
or specifies packaging paper
who asks for it on their
business stationery.
Another good rule is to try
Matthias on packaging papers.

Compelling Simplicity

Simple, dynamic display design gives full play to the powerful story of radiant health depicted by the artist in this full-color pictorial. Photographic groupings of product packages — also in full color — identify LEDERLE Vitamins which can be purchased in that store . . . *there* and *then*. Another example of resultful creative thinking and performance available to YOU at FORBES.

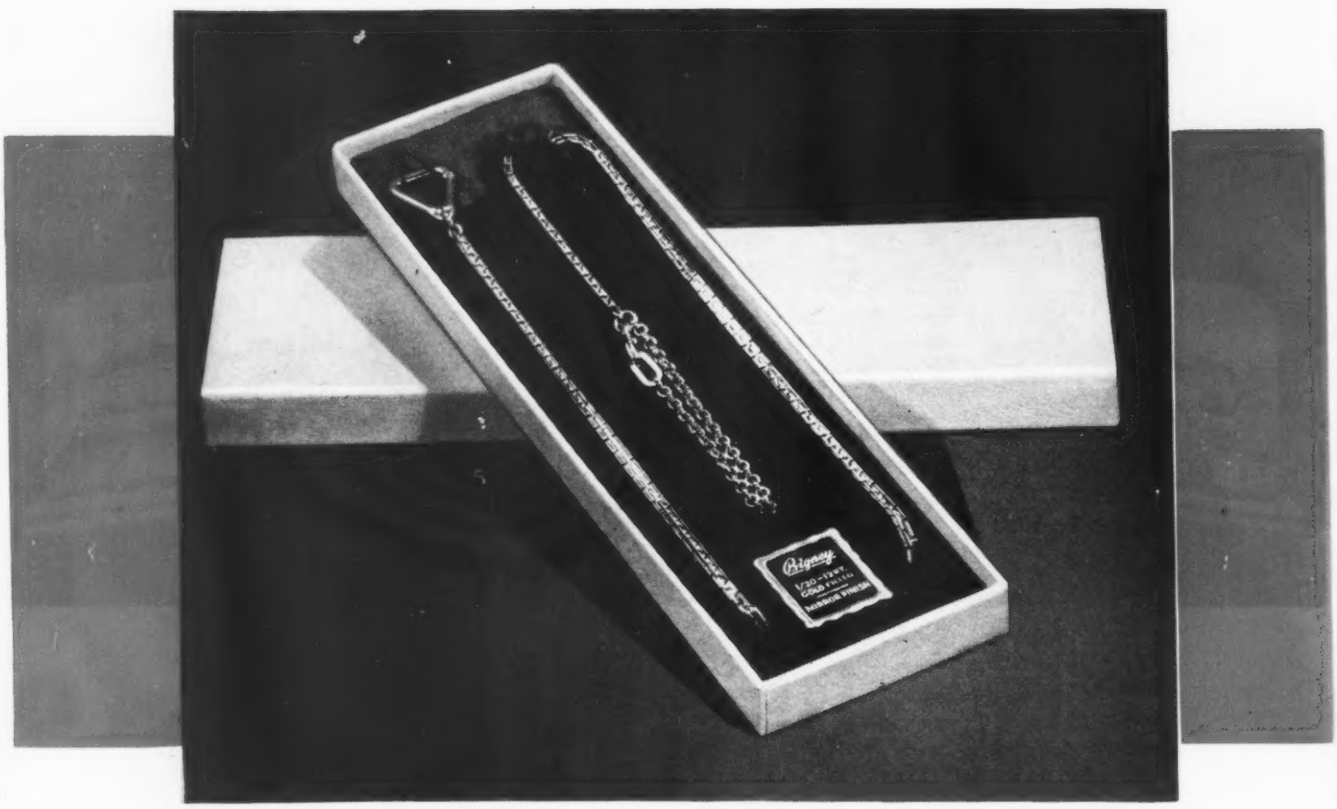
FORBES LITHOGRAPH CO.

P. O. Box 513 Boston 2

NEW YORK · CLEVELAND · CHICAGO · ROCHESTER

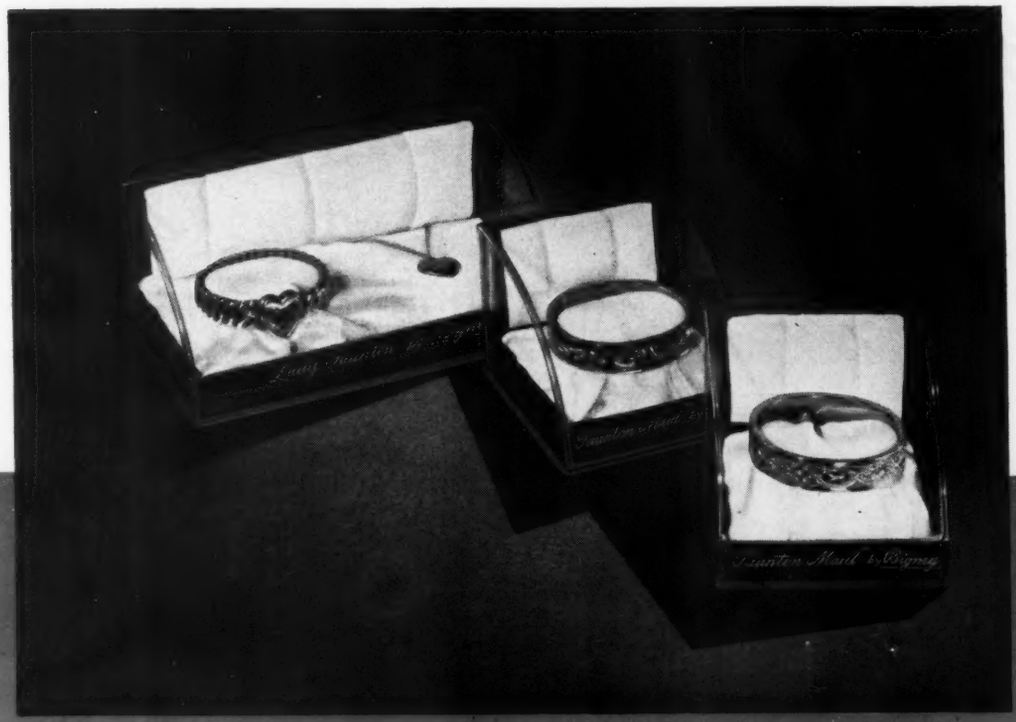
Shaw-Randall PACKAGES

KEEP BIGNEY JEWELRY OUT IN FRONT!



Playing its part in keeping the S. O. Bigney Company out in front in the national jewelry field is Shaw-Randall modern packaging. Bigney is among the first to put its product in sales-appealing transparent containers, and Shaw-Randall takes pride in being chosen to do the complete job of making these good products look their best.

Shaw-Randall has facilities for designing and producing set-up paper boxes and acetate packaging in all its branches.



In the merchandising of jewelry, cosmetics, fountain pens, hair brushes, clocks and countless other items, Shaw-Randall packaging has a record of keeping good products where they belong . . . out in front!

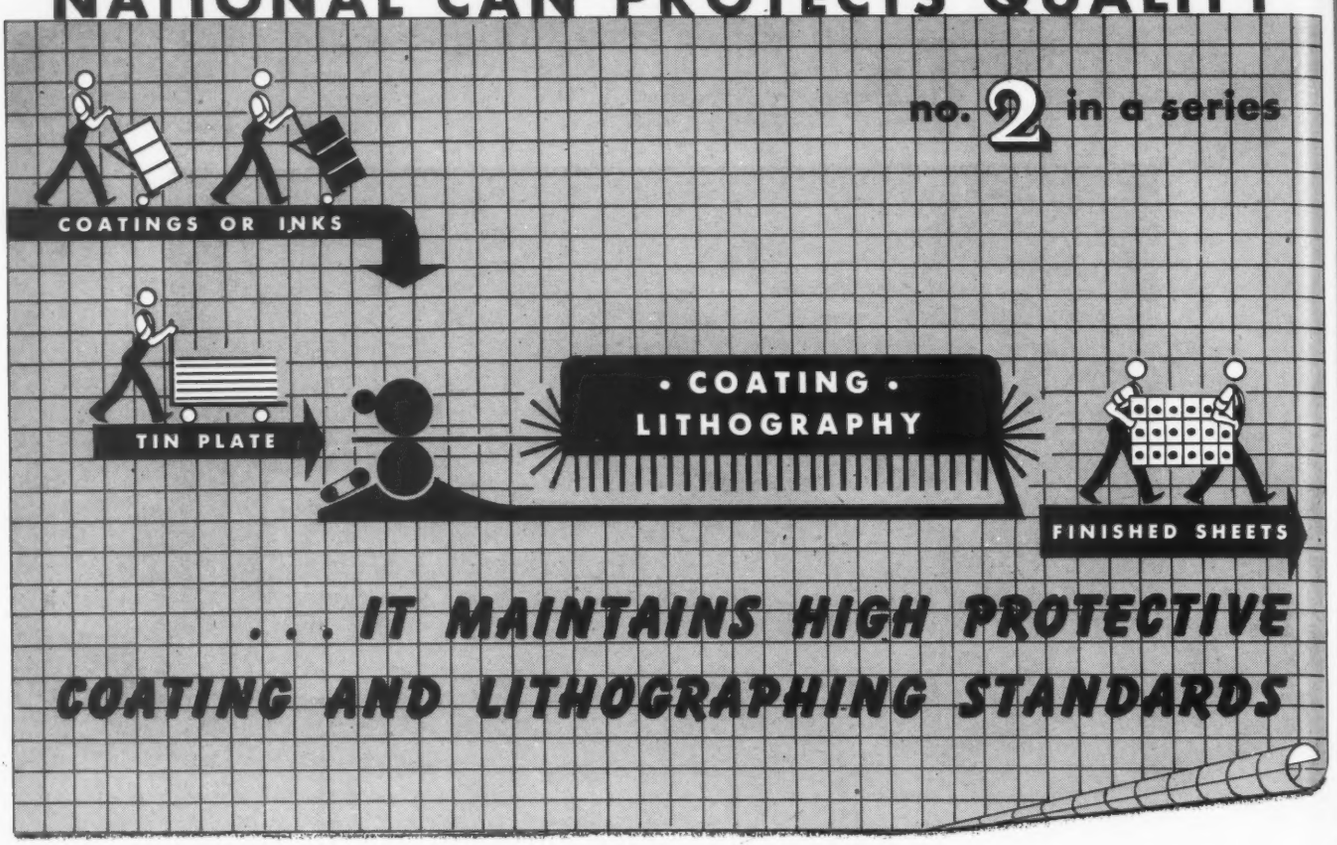
How does your product's package stand up against competition? Let Shaw-Randall show you how a modern transparent container or set-up paper box (or a combination of the two) can make your product a leader in its field.

SHAW-RANDALL COMPANY

A DIVISION OF THE SHAW-PAPER BOX CO. • PAWTUCKET • RHODE ISLAND
OFFERING COMPLETE FACILITIES FOR DESIGNING AND PRODUCING ACETATE DISPLAYS AND CONTAINERS AND SET-UP PAPER BOXES.

SALES REPRESENTATIVES:
FRED MANN & CO., NEW YORK
CHARLES T. RODGERS, M & T BUILDING, BUFFALO, NEW YORK

NATIONAL CAN PROTECTS QUALITY



When you have a metal container to be coated inside for protection, coated outside for decoration, lithographed outside for design and labeling, our long experience and expert knowledge will help you in many ways. We see to it that an inert lining, when needed, not only serves to preserve the product but also to safeguard the container itself, protecting it against corrosion. As the job may require, we carry out one or more of the successive steps of cleaning tin plate, applying a lacquer base coating, printing color by color with baking-in of each, and applying a finish of lustre and protection.

Our own artists, color specialists and photographers round out a coating-lithographing staff that includes skilled pressmen whose expert makeready and precise adjustment techniques insure perfect register in multiple impressions.

Further advertisements will feature, in the order of their occurrence, other examples of how National Can protects quality.

NATIONAL CAN
CORPORATION

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

SALES OFFICES AND PLANTS IN: BALTIMORE, MD. · CHICAGO, ILL. · HAMILTON, OHIO · BOSTON, MASS. · INDIANAPOLIS, IND. · MASPETH, N. Y. · McKEESPORT, PA. · ST. LOUIS, MO.

...es, and the eyes of Grandma today . . . and wolves, too . . . are on America's better packaged products. For better sales appeal it's eye appeal that gets the consumer demands. Your product packaged in an Old Dominion set-up box means easier, safer shipping—economical, too. Your Old Dominion packaging expert can be reached by phone, or write today. He will shoulder your packaging problems and explain the superiority of Old Dominion's complete line of containers which numbers set-up, corrugated, convolute, spiral wound, or folding boxes.

Write to department 53, Old Dominion Box Company, Inc., Charlotte, North Carolina, for folder, "A Set-Up for Sales".

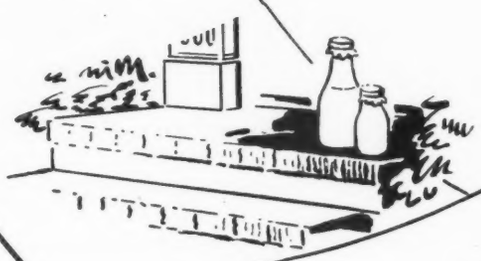
OLD DOMINION *Box Company Inc.*

PLANTS LOCATED THROUGHOUT THE SOUTH
NEW YORK REPRESENTATIVE
228 EAST 45th ST., NEW YORK 17, N. Y.
Phone MUrray Hill 2-6492

CHARLOTTE • N. CAROLINA

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

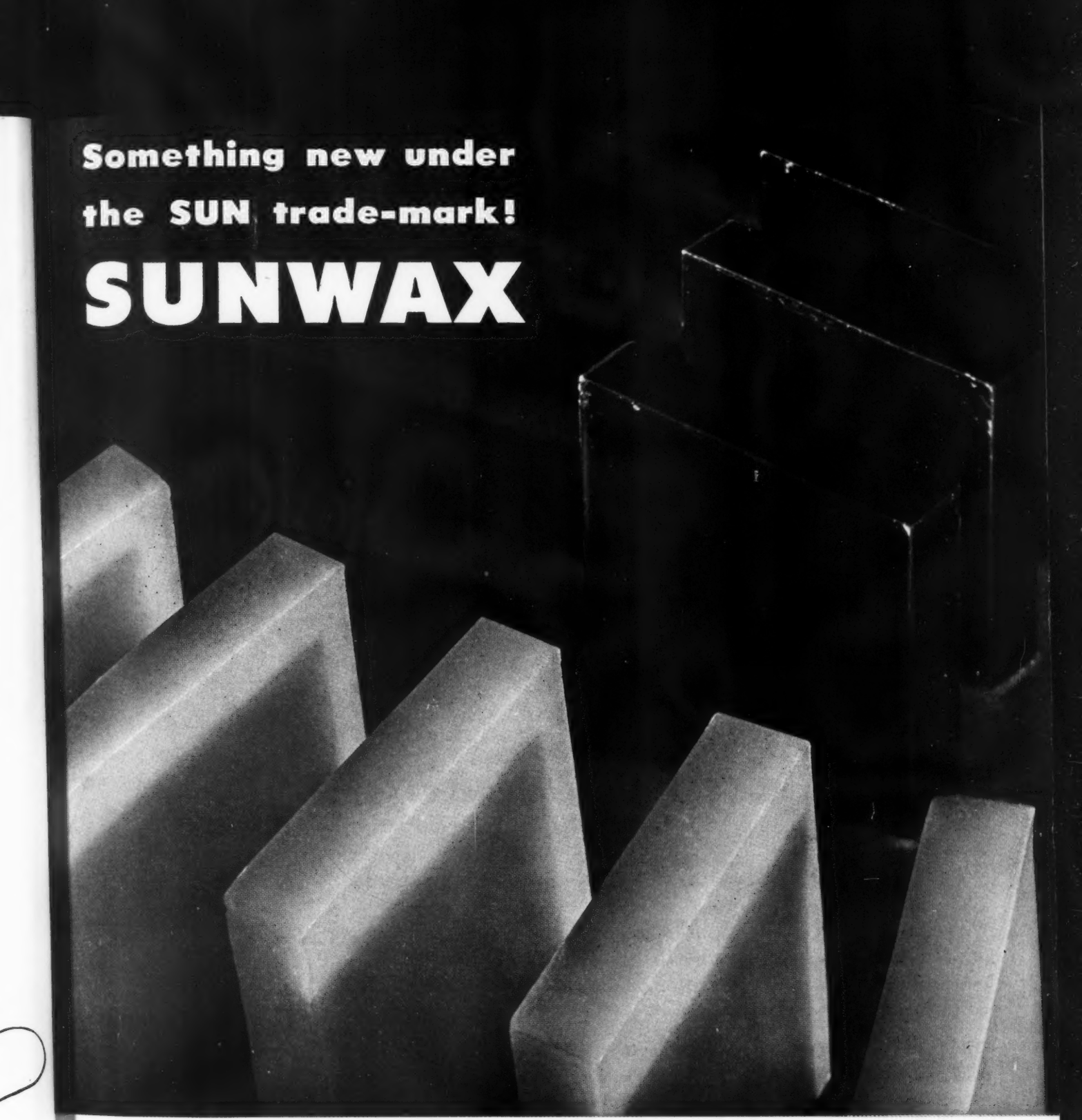
West Carrollton GENUINE VEGETABLE Parchment



From dairy to doorstep...

Milk can gaskets and milk bottle hoods are just two applications of the "second-to-none" protective value of West Carrollton Genuine Vegetable Parchment. Yes, this fine parchment—ideal for butter, ice cream, shortening, and many another perishable product—has *all the qualities* you want: it is odorless, unusually grease-resistant, has high strength under all conditions, "comes clean" when unwrapped from the product. You can get West Carrollton Genuine Vegetable Parchment *right* to your specifications—printed, if you wish, right in our own plant in one or more attractive colors. Specify it, next time you order.

WEST CARROLLTON PARCHMENT CO., WEST CARROLLTON, OHIO



The Sun Oil Company invites immediate inquiries on two new, high quality microcrystalline waxes—SUNWAX 1290 Brown and SUNWAX 1290 Yellow.

These new Sun waxes were developed for use in the paper-impregnation, packaging, electrical, electronic, paint and chemical industries . . . wherever resiliency, high melting point, and high resistance to shock or shattering are required. They are tenacious and uniform in physical characteristics. Approximate specifications for both types are:

MELTING POINT (ASTM D127-30)—175°-185°F.

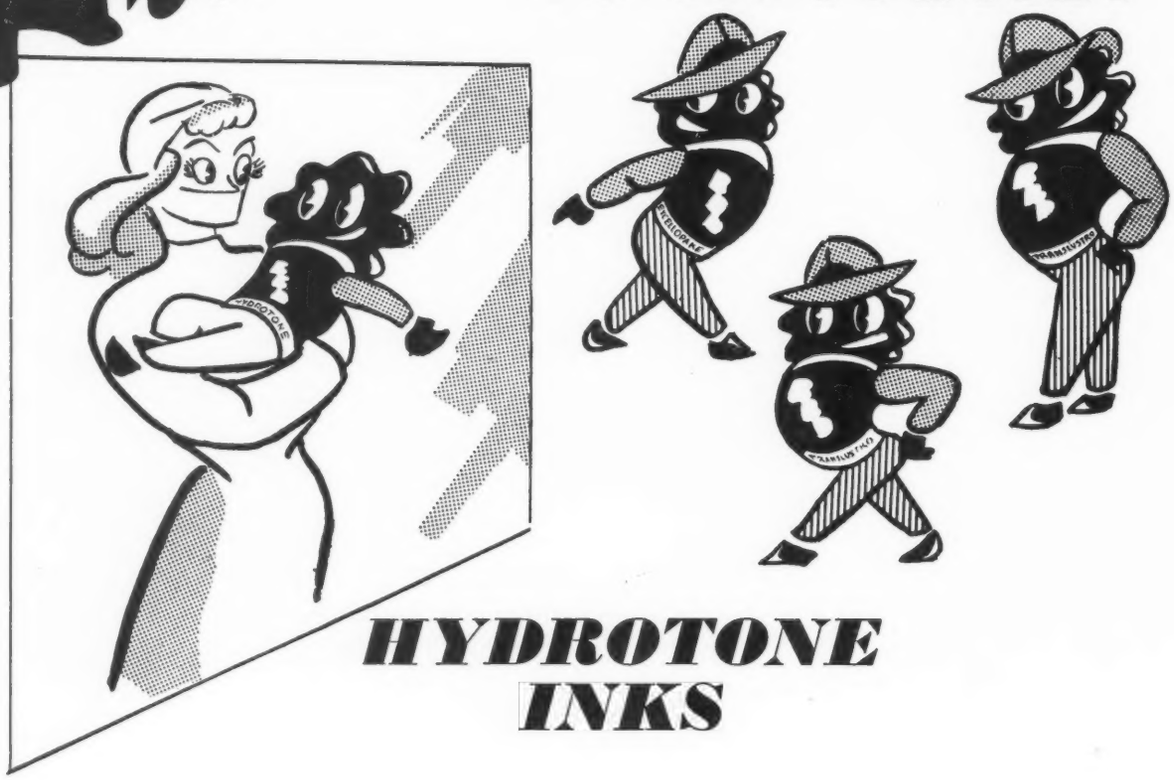
PENETRATION (ASTM D5-25)—15 MAX.

For full information call your nearest Sun office or write Dept. MP3, Sun Oil Company, Philadelphia 3, Pa.

SUNOCO **SUN INDUSTRIAL PRODUCTS**

An addition..

TO OUR FAMILY



HYDROTONE INKS

HYDROTONE inks are a new type of aniline ink which have just been released by our Research & Development Laboratory after having been thoroughly tested in the press room.

HYDROTONE inks are water type inks which need only to be reduced with water to running consistency. The roller, plates and fountains can be cleaned with water alone.

HYDROTONE inks were created for gift wraps and decorative papers, and give soft water color prints. They also can be used for doilies, notion bags, bread wraps, box top covers, and many other types of printing on absorbent paper stocks.

HYDROTONE inks offer the following advantages:

(1) ***Low cost—Inks in a full range of colors that will give you increased mileage at low cost.***

(2) ***Elimination of fire hazards.***

(3) ***Press rollers and plates can be washed with water.***

(4) ***Water is the only reducer that need be added to these inks.***

(5) ***High production speed on press—Inks can be run continuously without wash-up at 500 feet or more per minute.***

(6) ***Inks print sharply and cleanly and give soft water color effects. Will also stand embossing and corrugation.***

(7) ***Inks do not smudge or run after printing on paper.***

Largest Manufacturer of Aniline Inks in U.S.A.

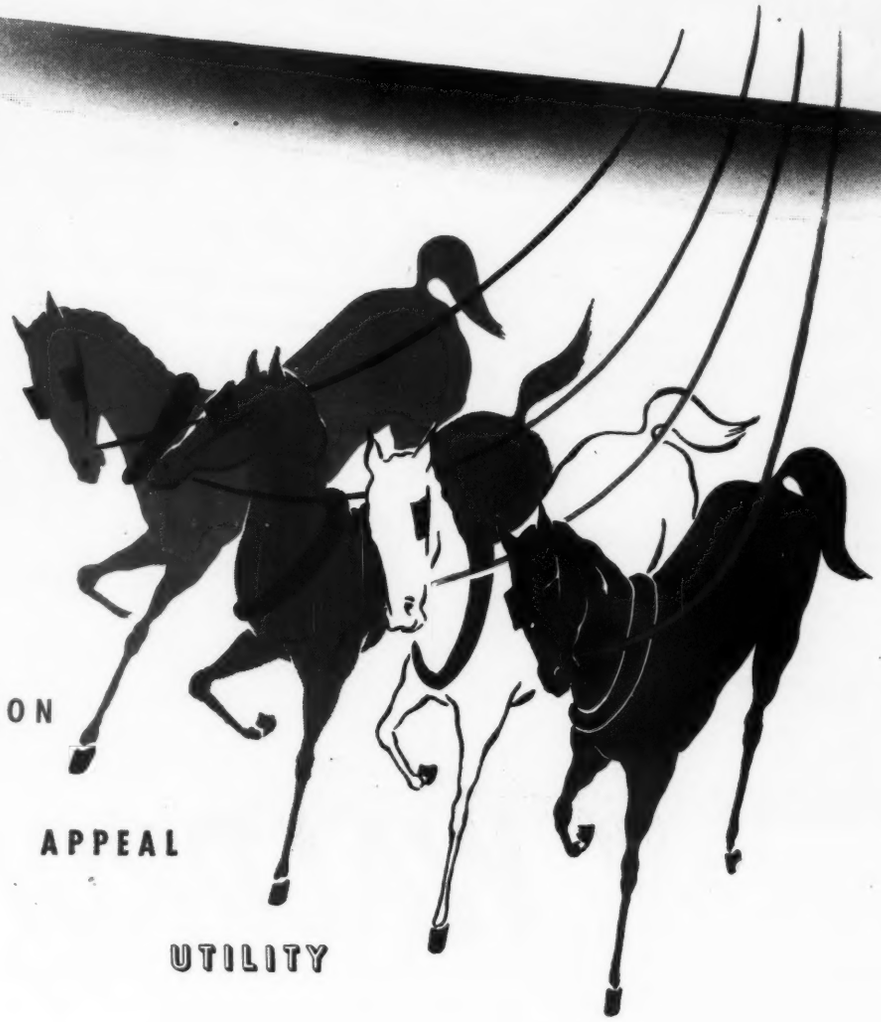
Bensing Bros. & Deeney

401 N. Broad Street
Philadelphia

Aniline Ink Specialists

330 S. Wells Street
Chicago, Ill.

FOUR-IN-HAND...



PROTECTION

APPEAL

UTILITY

COST LIMITATION

Ship products in bulk and save on lower custom and freight tariffs. New containers designed to your specifications. Every Rowe Package embodies product protection, sales appeal, consumer utility and cost limitation.

Your inquiries invited.

ROWE

A *Complete* PACKAGING SERVICE

ROWE PACKAGING CO. LIMITED — TORONTO, CANADA

Part of the picture of famous products
CROWN CLOSURES
CLOSURE users, large and small, find it pays to deal with a qualified specialist in this line. That's why you find Crown Closures on so many of America's best known brands of food, cosmetic, drug and household products packaged in glass.
SCREW CAPS
LUG CAPS
VPQ CAPS
VENT CAPS
BOTTLE CAPS
Waldron high speed two web Laminator — one of the many types of Waldron Laminating Machines.

Processing Machines by WALDRON

Among Prominent Users of Waldron Processing Machines are the following:

Container Corporation
General Felt Products Co.
National Folding Box Co.
Owens-Illinois Co.
Sealright Corporation
Standard Cap & Seal Co.
and many others

SEND FOR CATALOG 118

Attractively illustrated book that treats past and present in laminating methods; describes wide variety of Waldron machines available for producing any type of laminated product.

Metal caps or closures are only as good as the efficiency of their liners. To make certain that the cap liner will provide a tight cushion seal and resist the action of alcohol, acid or other ingredients in the bottled substance, Crown Cork & Seal Company and other leading makers of closures use Waldron Laminators to produce their quality liners. Laminated combinations of felt, cork, pulpboard and foil are used to form materials with highest sealing efficiency and the modern Waldron machines produce these laminations with speed and uniformity.

In many other industries where two or more plies of materials must be combined into a single structure, Waldron Laminators are doing the job.

Coating Machines
Creping Machines
Embossing Machines
Floor Cov. Machines
Gumming Machines
Laminating Machines
Printing Machines
Rubber Mill Machines
Wall Paper Machines
Waxing Machines
Winders and Slitters
Special Design Machines

JOHN WALDRON CORP.

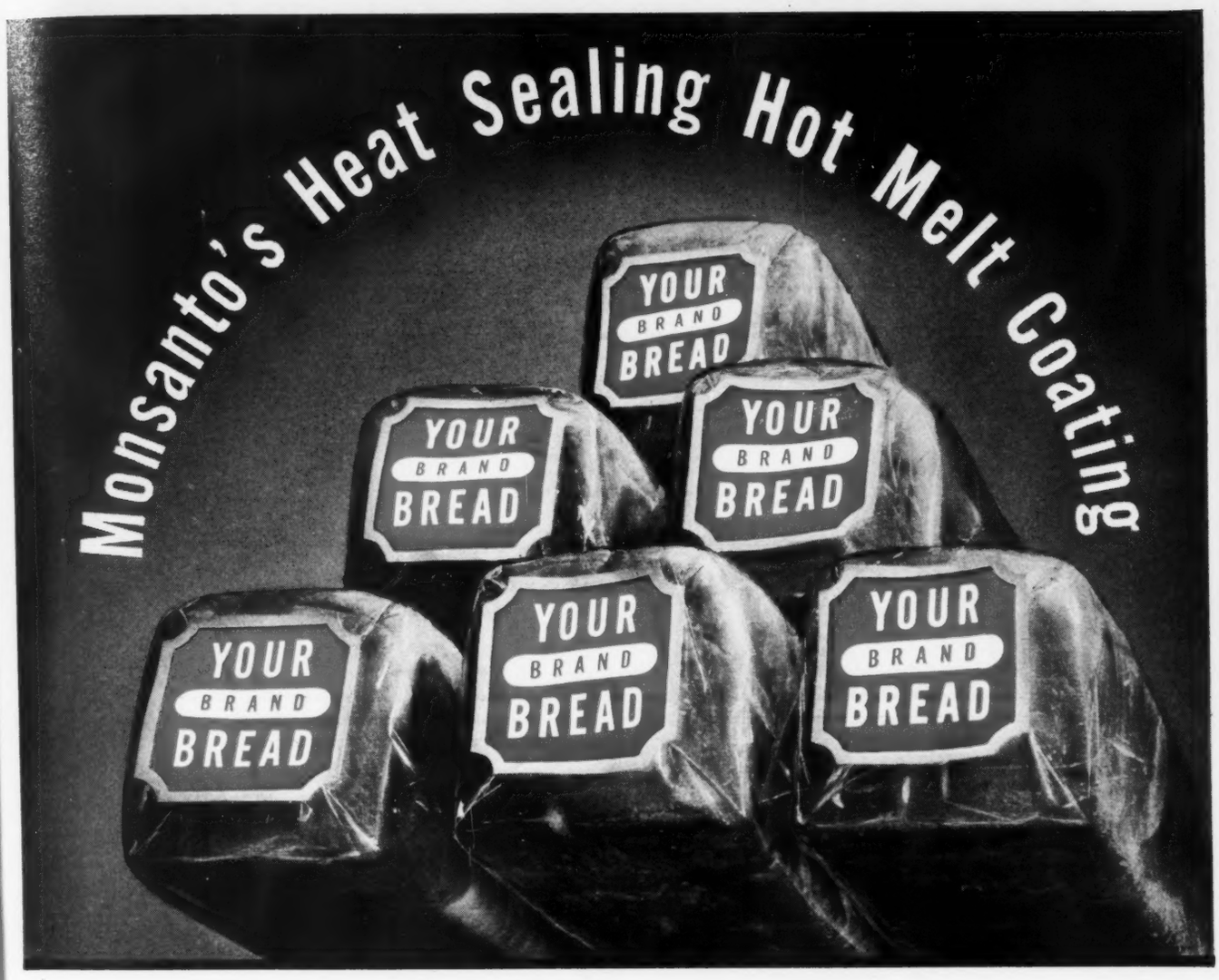
Main Office & Works – NEW BRUNSWICK, NEW JERSEY

CHICAGO - 6
201 N. WELLS ST.

NEW YORK - 17
350 MADISON AVE.

BOSTON - 9
79 MILK ST.

BUILDERS OF QUALITY MACHINES SINCE 1827



for End Labels

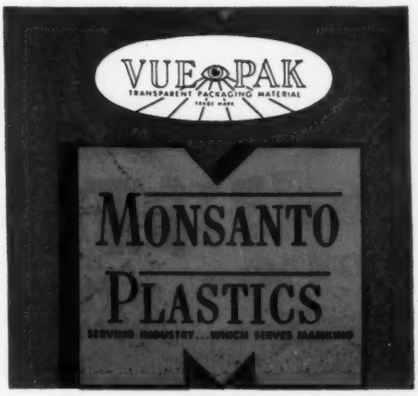
Whatever your product, your label *should* do a big job. And you can be sure that it does that job right when it is coated with Monsanto's heat sealing hot melt coating.

For example, on the end labels for specialty breads, Monsanto's heat sealing hot melt coating does an especially important job:

1. Ends of the wrapper effectively sealed
2. A clean, quick labeling operation
3. Labels positioned for most effective display
4. Eliminates expensive and unsatisfactory inserts, bands and glued labels
5. Provides a method for quick label changes, making coding and dating simple
6. An opportunity for a colorful, salesmaking message

You can get these same labeling advantages for your product. This special plastic coating will make your label stick to cellophane, waxed paper, glassine, acetate or foil. You can count on maximum labeling efficiency and economy by using labels coated with Monsanto's heat sealing hot melt coating.

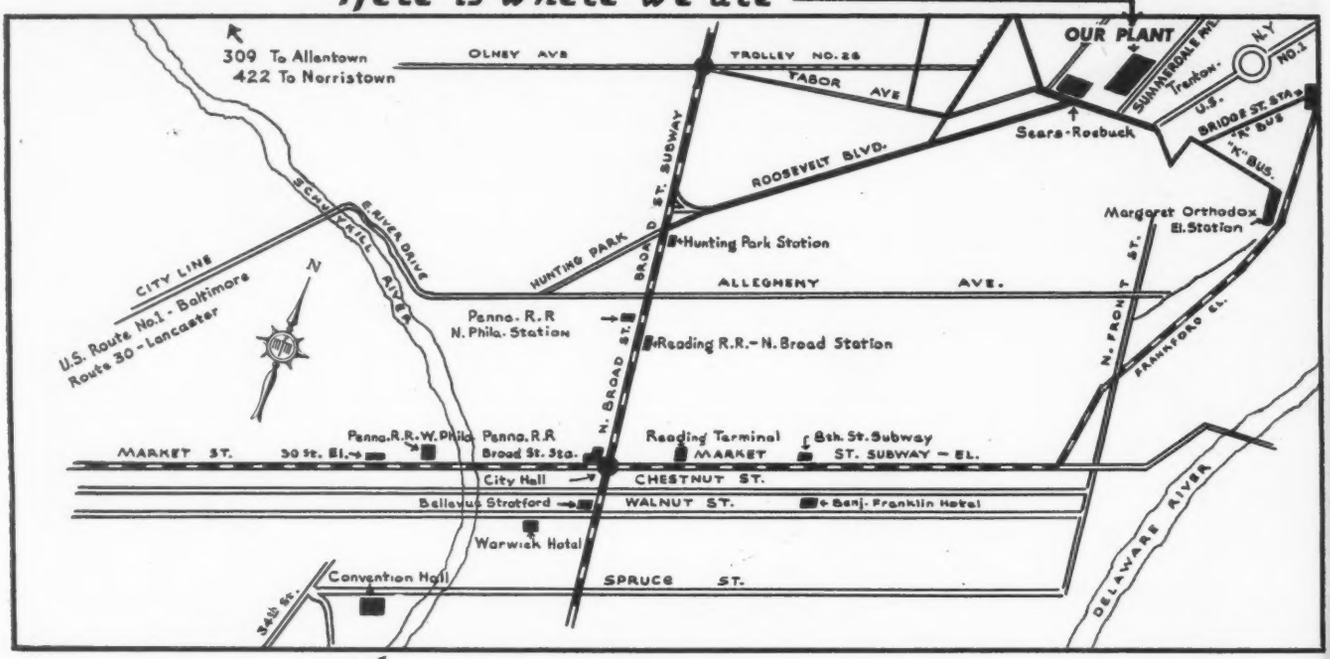
Ask your label supplier for complete information, or write direct to: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.



WHEN IN PHILADELPHIA come and see us

we will be glad to show you our Plant and how we build our Filling, Packaging and Wrapping Machines

Here is where we are



Here is our Plant

FILLING • PACKAGING • WRAPPING MACHINES

for foods, groceries, drugs, chemicals, cosmetics, etc.

"Better machines for better packages"

"SPEEDS TO SUIT YOUR NEEDS"

STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

SUMMERDALE AVE., NEAR ROOSEVELT BLVD.
PHILADELPHIA 24, PENNSYLVANIA

Bringing up Baby

in the manner

Your new product should step out into the limelight of competition with all the style, dash and "come hither" appearance that guarantees a sale.

We do the complete job of designing and producing . . .

- **LABELS** • **CARTONS** • **CONSUMER FOLDERS**
- **COUNTER DISPLAYS** • **WINDOW DISPLAYS**
- **BROADSIDES** . . . *and whatever else is required for successful merchandising of your product.*

lets talk it over...

BROOKS & PORTER *Inc.*
304 HUDSON STREET • NEW YORK

Creative Packaging and Display Specialists for half a century

PORTRAIT of a USEFUL FAMILY!

A series of graduated containers for WAGNER ELECTRIC CORP.

designed by *Sefton*

Sefton has created a whole family of containers that Wagner Electric Corp. has found amazingly efficient for its products! There are a variety of handy sizes, factory sealed for parts protection and tamper proof, designed to package Lockheed hydraulic brake parts, automotive parts and other Wagner Electric products! Typical Sefton craftsmanship . . . including sturdy metal ends! More reasons why you, too, should look to Sefton to solve your packaging problems!

Sefton
FIBRE CAN COMPANY
ST. LOUIS . . . . . NEW ORLEANS

DISTRICT OFFICES: **• Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle**

Little Masterpieces of Hand Blown Crystal Glass

Available now — exquisite miniature perfume containers, ranging in capacity from a few drops to one ounce! Photograph shows one popular shape: Note how individuality and character can be dramatized by use of decorative stoppers and hand-applied floral designs. Exclusive styles can be manufactured on special order.

GLASS INDUSTRIES MINIATURES FEATURE PATENTED "THREAD-LOK" STOPPER—APPLICATOR which prevents leakage and evaporation of perfume.

GLASS INDUSTRIES INCORPORATED

DESIGNERS GII MANUFACTURERS

10 WEST 33RD STREET, NEW YORK 1, N. Y.

VINYLITE* ORGANOSOLS... BY *Watson-Standard*

VINYLITE Organosols are the most versatile group of technical coatings made available and present unlimited opportunities in the paper, foil, and textile industries. This new series of coatings is highly resistant to water, grease, oil, chemicals, and heat. They are chemically inert, non-toxic, tasteless, and may be heat-sealed. Utilizing inexpensive solvents, solids of 60% and higher are now being produced commercially, with uniformity readily controlled by our commercial experience and laboratory techniques.

High Solids VINYLITE Organosols are practical and easily adaptable to your own use. Typical applications include luggage, paper table cloths, window shades, drapes, food packages and other containers, etc. These prescription compounded coatings are made in brilliant colors or water clear, and produce a high gloss surface that is free from cracks and creases. Write for a copy of Technical Data Folder on High Solids VINYLITE Organosols.

*VINYLITE is a trade mark of BAKELITE CORPORATION, Unit of Union Carbide and Carbon Corporation.

THE WATSON-STANDARD CO.

Manufacturers of
PAINTS • VARNISHES • INDUSTRIAL
FINISHES AND LITHOGRAPH COATINGS

TOUGH JOB HEADQUARTERS
Rx Prescription Finishes
Give us your coating problem. We guarantee you an answer based on your conditions and not just a standardized formula.

FACTORY AND GENERAL OFFICES:
PITTSBURGH, PA. • WAREHOUSES:
BOSTON, BUFFALO, DETROIT, NEW YORK

A PACKAGE IS A PUZZLE

WITH 167 PARTS

Putting together a jig saw puzzle and designing a package have much in common. In a puzzle – each piece is considered individually . . . each piece must fit . . . each piece is necessary to make it complete.

When producing a container – our designers and craftsmen consider as many as 167 factors . . . such as product characteristics, selection of packaging material, adaptability and convenience of package for distributors and consumers . . . plus economy and merchandising considerations. These 167 factors are systematically evaluated in meeting the requirements of your packaging problem.

For almost 50 years, Cambridge Containers have been *designed* and *built* . . . not just made. They become an integral part of your product . . . dress it up to be self-selling. Let us help you solve your container problems.

CAMBRIDGE
Containers

CAMBRIDGE PAPER BOX COMPANY

PROVIDENCE CAMBRIDGE, MASSACHUSETTS NEW YORK

RECTANGULAR AND ROUND BOXES • PLASTICS • LABELS AND ALLIED PRODUCTS

Near Crisis at Oxford Paper Company by Tony Barlow

499998
Tony Barlow
FEARFUL MOMENT! WHATEVER HAS HAPPENED TO OXFORD OUTPUT—THE MILL USED ONLY 499,998 KILOWATT-HOURS OF ELECTRICITY THIS DAY INSTEAD OF THE USUAL 500,000 KILOWATT-HOURS!

IN making over 1,000 miles of quality paper a day, the Oxford plant uses enough electrical power to supply a city of more than *250,000 people.* A lot of power!

Typically, Oxford produces all this electricity in its own hydro-electric and power plants. It is another major example of Oxford's completeness of operation.

Every step of papermaking, from beginning to end, is directly under Oxford's control. From wood to finished paper, product quality is considered in each operation. Consequently Oxford can set high quality standards and maintain them. In fact, over 5,000 separate laboratory tests for quality are made during each day's output—thus supplementing the skill and know-how of Oxford's veteran papermakers.

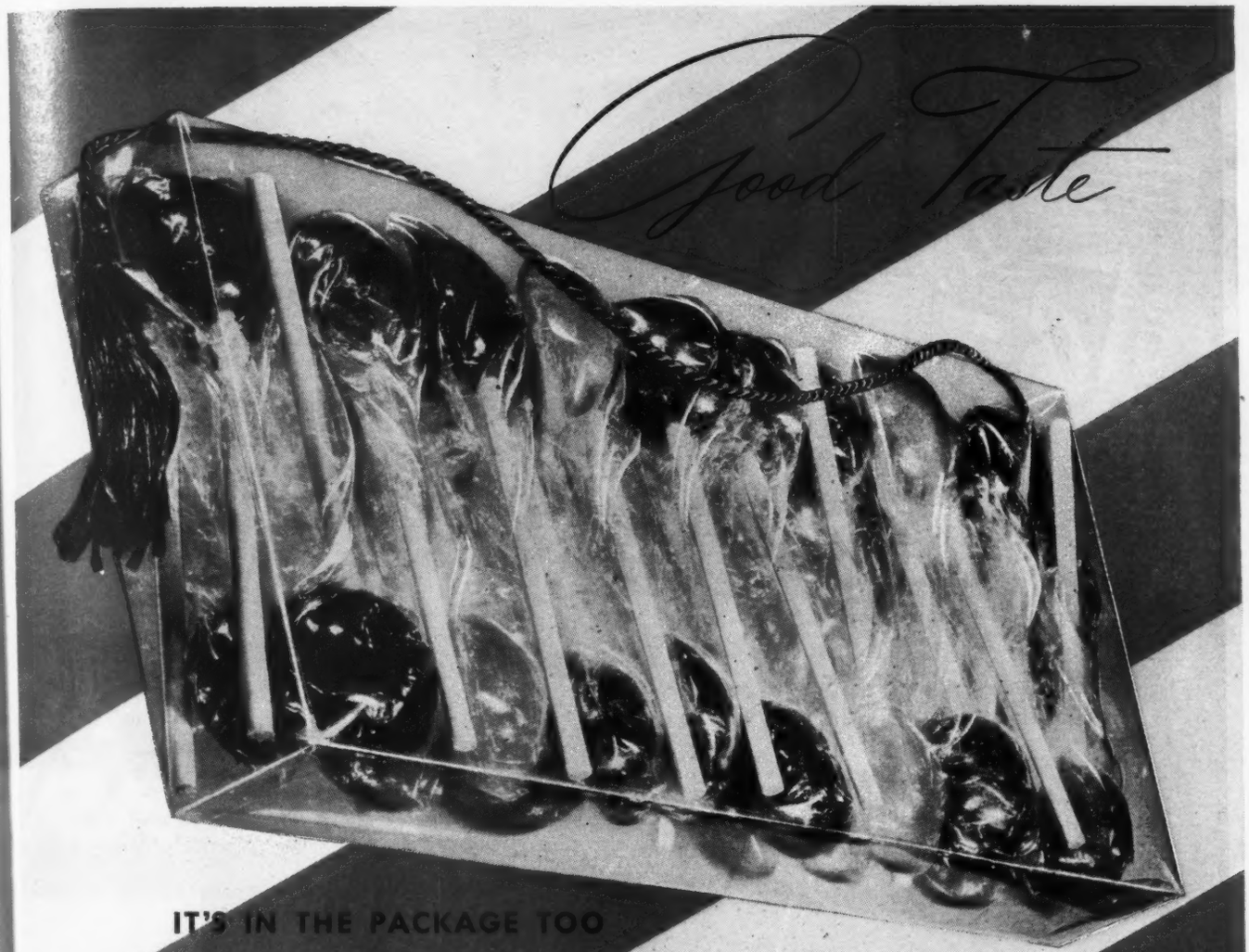
To the user of Oxford Quality Papers this completeness and scrupulous care mean quality uniformity and reliability of service.

Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED—Polar Superfine, Maineflex, Maineflex C1S Litho, Mainefold and White Seal; UNCOATED—Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio | *WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.* | *DISTRIBUTORS in 48 Key Cities*



IT'S IN THE PACKAGE TOO

TOP NAMES IN THE CANDY INDUSTRY DEPEND ON LUMARITH* PLASTIC FOR PACKAGING PERFECTION

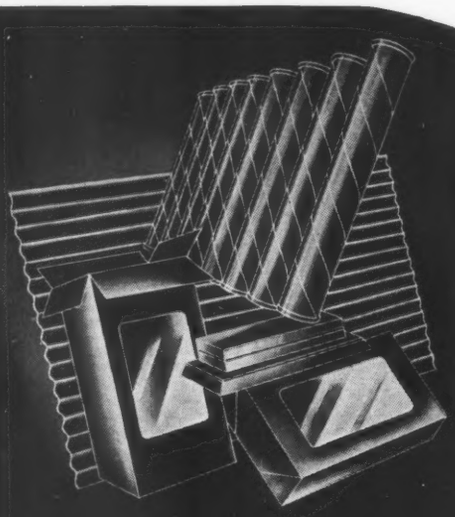
What is the most effective way to sell sweet? That's easy . . . Show that it's good enough to eat! That's why great names in candy such as: Whitman, Adams, Beechnut, La Maran[illegible], Altman & Kuhne, Charles & Co., Jay Franklin Myers, Russell Stover [illegible]m so often select "the package that displays" to attract the shopper with a sweet tooth.

When sales-pulling visibility is needed, Lumarith transparent film and sheet are your first choice packaging materials. Lumarith is easy to fabricate . . . Long or short runs are possible without investment in expensive dies . . . Stock boxes are always obtainable from converters . . . Plastics Division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y., producers of Lumarith*, Forticel*, Celluloid*, Vimlite* and Celconf.

*Reg. U. S. Pat. Off. †Trademark

Lumarith*

A CELANESE† PLASTIC



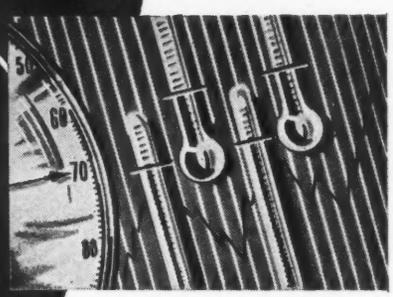
time temperature humidity

● Must the adhesive set in one-tenth of a second or ten minutes?

● Must the adhesive bond last three months or thirty years?

● Must the adhesive be applied under extreme cold or extreme heat?

● Must the adhesive bond stand up under such extremes?

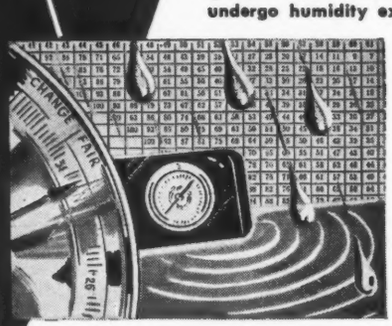


■ Whatever the condition, the Union Paste Company will scientifically tailor an answer for your problem . . . an ordinary packaging or assembly job, or perhaps an entirely new project. The **UNION PASTE COMPANY** specializes in creating adhesives to meet your own particular requirements in every way.

For further information, please write *today*.

● Must the adhesive be applied under dry or moist conditions?

● Must the adhesive bond undergo humidity extremes?



CONTAINER ADHESIVES BY

UPACO

ADHESIVES FOR ALL PAPER, TRANSPARENT FILMS, AND ALLIED CONVERTING FIELDS

THE UNION PASTE COMPANY

1605 HYDE PARK AVENUE HYDE PARK, MASSACHUSETTS

Sure it's GRAVURE

SURE IT'S WAXED PAPER. And Champlain Rotogravure Presses produce equally striking results on many other functional wrapper stocks, too! Gossamer-thin cellophane or tissues, carton stocks, glassines or foils – pick the one that's best for *your* product's appearance and protection and Champlain Rotogravure Presses do the rest with push-button ease.

SURE IT'S COLORFUL. Birds Eye wrappers show the product in mouth-watering full color—still they're printed *fast* by Champlain Rotogravure. The exclusive fully enclosed Speedry ink fountain permits Champlain Presses to use instant-drying inks and lacquers and to deliver rewound or sheeted ready for immediate fabrication. Standard Champlain embossers, perforators, scorers, punches, glue applicators—built to the same precision standards as the press itself—can be built *in line* for specialized long run production.

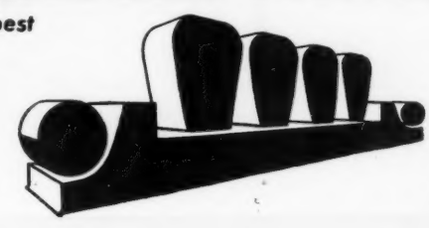
SURE REGISTER'S SUPERB. Champlain's 360° running register control—*push button operated*—corrects color register *instantly*. The micro-fine screen of rotogravure – and Champlain's method of ink consistency control – retain delicate tonal gradations of original copy with utmost fidelity.

YES – GRAVURE COSTS LESS. Rotogravure – long known as the quality process—actually costs less. Champlain Presses are precision-built—yet priced to compete with equipment they far excel in versatility and speed. Send samples of your present labels, wrappers or inserts for a specific analysis of what Champlain Rotogravure can do for you.—Champlain Company, Inc., 88 Llewellyn Ave., Bloomfield, N. J.

CHAMPLAIN
ROTOGRAVURE PRESSES

rotogravure at its best

Speedry



:2334

round packages

That Go 'Round the World

Round paper containers made by Harcord are used everywhere for dry products—all over the globe—because they meet the most exacting requirements.

READY FOR IMMEDIATE DELIVERY *are Harcord's*

- sturdy round canisters with paper or metal ends for the drug, chemical and food industries
- distinctive round and oval cosmetic boxes with curled edges
- efficient dust guns for insecticides
- special tubes suitable for display, toy and industrial uses.

Harcord produces round containers of all types—spiral or convolute—speedily and in quantity. Harcord packaging experts have years of experience which is at your service now to help solve your package problems.

HARCORD MANUFACTURING CO.

A Division of the Meehan-Tooker Co.

152 BAY STREET • JERSEY CITY 2, N. J.

Phone: DELaware 3-1212

*Blue stops the eye, starts the sale

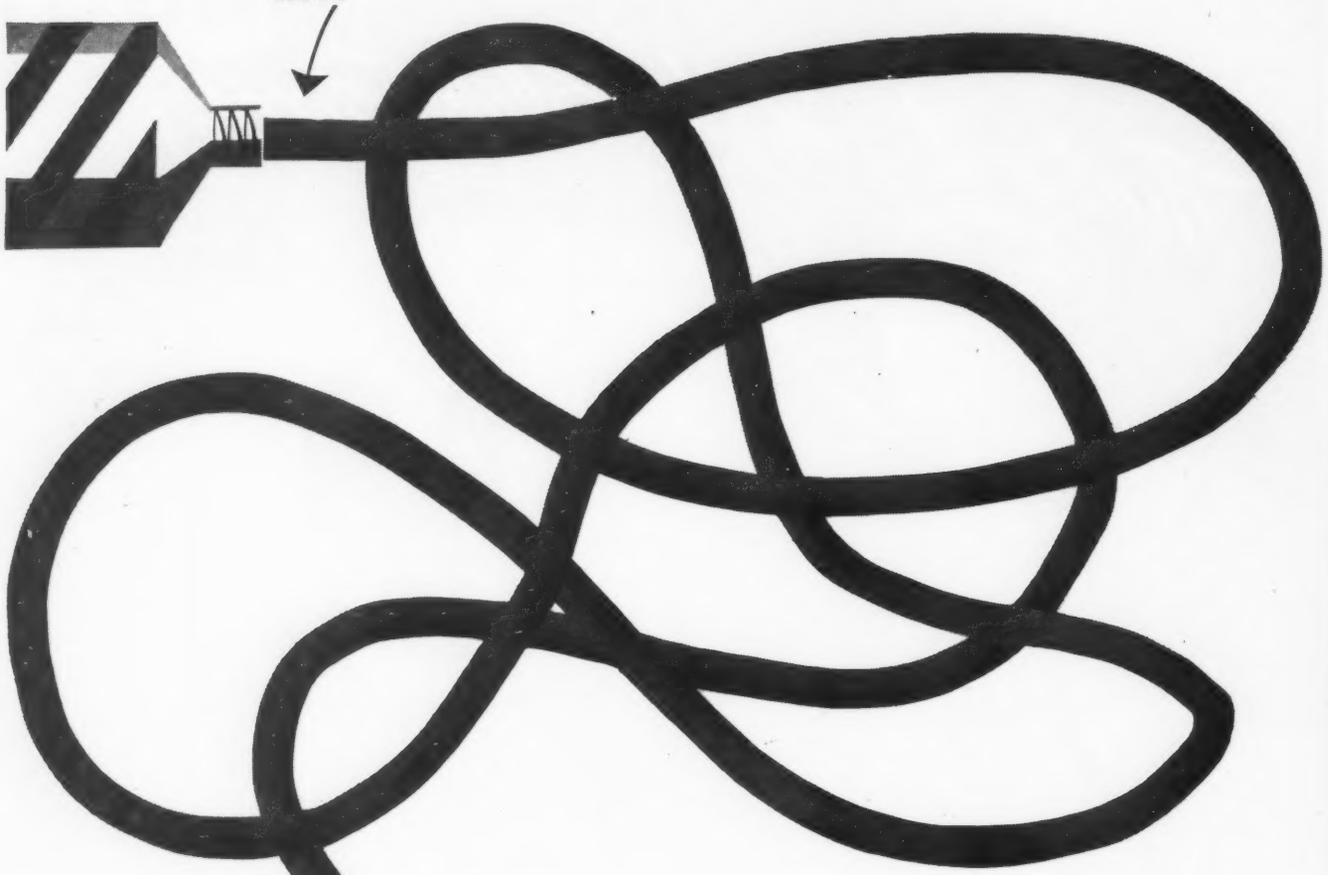
PACK TO ATTRACT IN

Maryland Blue

MARYLAND GLASS CORPORATION • BALTIMORE 30, MARYLAND

CHICAGO: Berman Bros., Inc., 1501 S. Laflin St. • CINCINNATI: J. E. McLaughlin, 401 Lock St.
JERSEY CITY: Maryland Glass Corp., 50 Journal Sq. • KANSAS CITY: Aller Todd, 1101 Mulberry St.
MEMPHIS: S. Walter Scott, 608 McCall Bldg. • ST. LOUIS: H. A. Baumstark, 4030 Chouteau Ave.
SAN FRANCISCO: Owens-Illinois Glass Co., Pacific Coast Division, 320 California St.

We could tell a story stretching from here



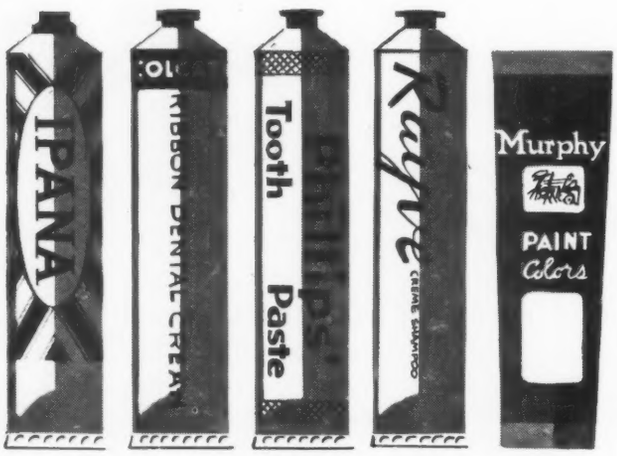
. . . to here

all about tolerances and controls and alloys, but we'd rather

cut it short

and say that there are no better tubes in the world than Sun Tubes,

and one proof is that we make them for products like:



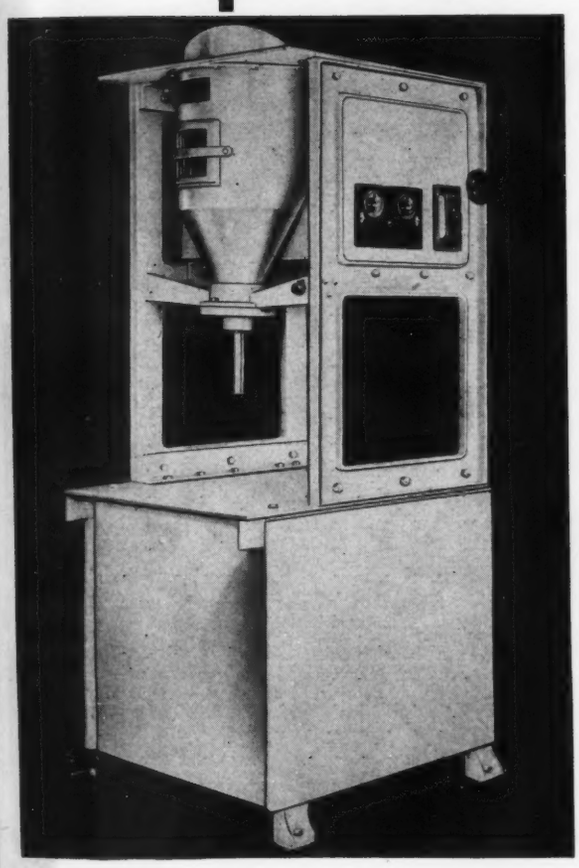
And there we cheerfully rest our case.

Sun Tube Corporation

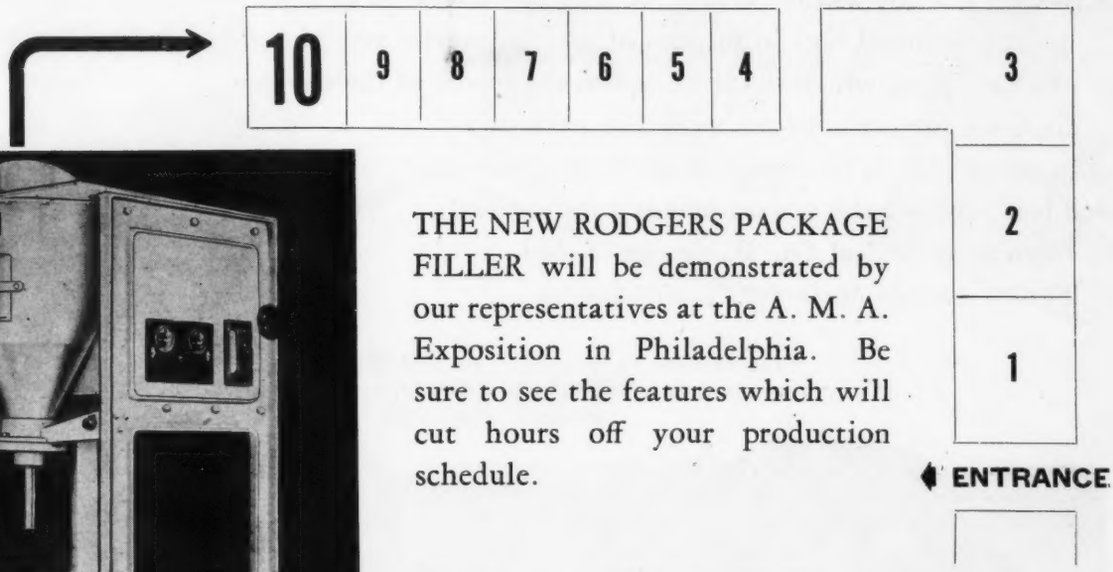
Hillside, New Jersey

CHICAGO 3, ILL. James L. Coffield, Jr., 105 West Adams Street
LOS ANGELES 27, CALIF.
R. G. F. Byington, 1260 North Western Ave.
ST. LOUIS 1, MO. M. P. Yates, Arcade Building
ST. PAUL 1, MINN. Alexander Seymour, 615 Pioneer Building
CINCINNATI 8, OHIO, Ralph H. Auch, 3449 Custer Road

THE NUMBER ONE *Filler* WILL BE IN BOOTH TEN



PATENT PENDING



THE NEW RODGERS PACKAGE FILLER will be demonstrated by our representatives at the A. M. A. Exposition in Philadelphia. Be sure to see the features which will cut hours off your production schedule.

Sturdily designed by Cragar, the Rodgers Filler uses a simple dial adjustment to control package fill time and package transfer time. The adjustment allows accurate changes for any type of material. No foot pedals are used to control the filling cycle.

Cams are eliminated. All mechanisms are located above the tube and auger. All bearings are sealed.

The Rodgers Filler is designed to accurately fill all types of rigid or flexible containers with pulverized, granular, crystalline, or paste materials.

It has a range of from ⅓ oz. to 10 lbs., height 79″, floor space 29″ x 36″, shipping weight approximately 700 lbs.

If you cannot be with us at the A. M. A. show, send us a sample of your product and we will arrange a practical demonstration.

Prompt deliveries available on a limited number of machines.

GEORGE G. RODGERS COMPANY, Inc.

225 WEST 34th STREET

BRyant 9-2040 NEW YORK 1, N. Y.

It's a cinch!

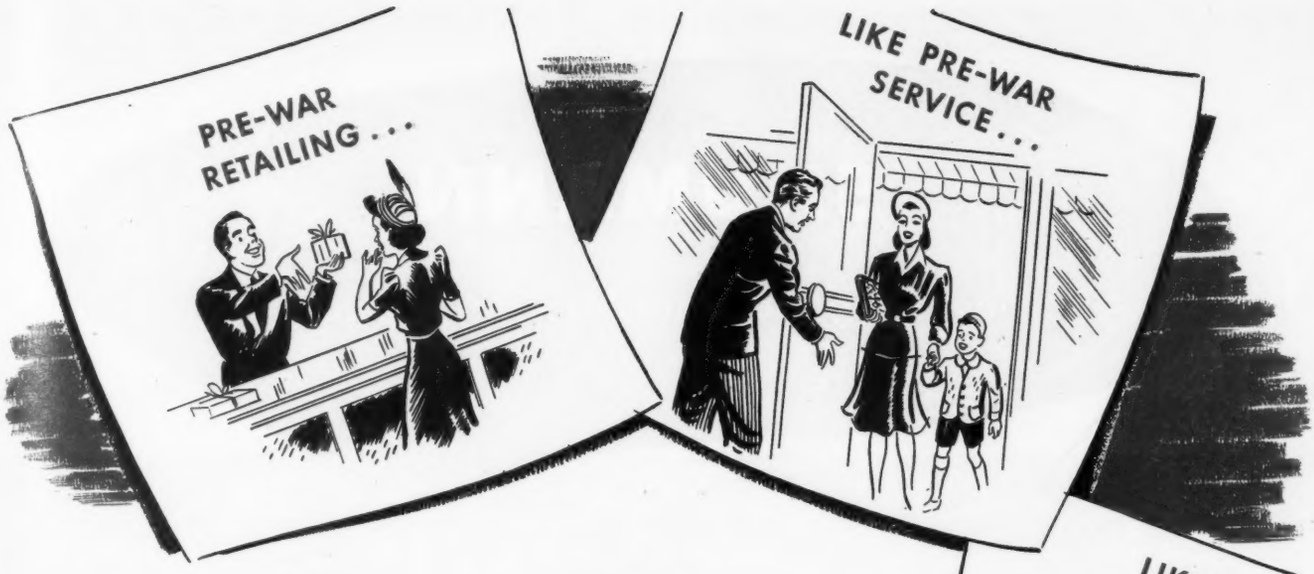
Deciding which one of these Spencer Farms preserves to choose isn't much of a problem for this youngster. He knows that any way you figure it he's in for a treat. ◆ No more difficult was the selection of the Crown VPO Cap as the closure for these products. VPO Caps utilize the "top sealing" principle. Small lugs in the rim of the cap exert a vise-like grip, while the patented Slip Rubber Ring which is vulcanized to the inside of the cap creates a perfect hermetic seal. The back of a can opener blade is a handy pry-off cap remover, and just pressing the cap on makes a tight reseal.

Crown Cork & Seal Co., Baltimore, 3, Md.

World's Largest Makers of Metal Closures.

These Spencer Farms products are packed by the Palmer Fruit Products Co., Long Island City, New York.

CROWN CLOSURES



Retailing Your Product...1947

TODAY—*try* to get a retail clerk to SELL you something. Try to imagine him actually SELLING your product!

Today—not only is self-service on the increase in groceries, supermarkets and drug stores—but the spirit of "let the customer serve himself" permeates *all* retailing. The idea seems to be, "Let the *customer* decide what he wants and ask for it."

And that is precisely what customers are doing—*not before they enter but while they are in the retail stores!*

Women buy ¾ of all goods sold at retail. And surveys show they (62% to 75% of the 65 million adult American women) make up their minds *what brands to buy* at the point-of-sale —*after* they have entered the stores.

This means that *selling your product at retail* in 1947—is largely up to your *package!*

WAY TO INCREASED SALES

Let Ritchie help you develop a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill or pack—to handle, to stack or display— but above all an attractive, SELLING package.

Never the Power

Copyright W. C. Ritchie & Co.

W.C. Ritchie and COMPANY
8042 Baltimore Avenue • Chicago 17
★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES

Underestimate of the Package!

NEW YORK • DETROIT • LOS ANGELES
ST. LOUIS • MINNEAPOLIS • MILWAUKEE • PITTSBURGH
PORTLAND • SEATTLE • MIAMI

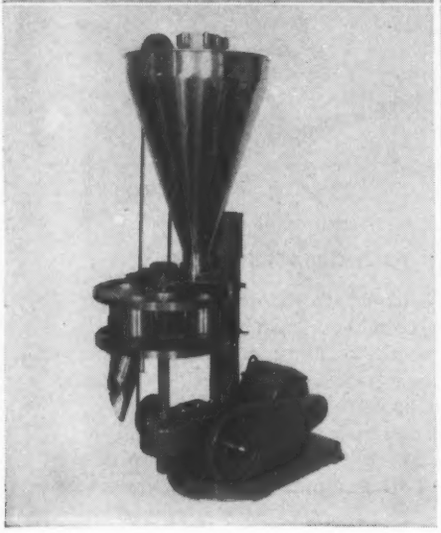
SHUMANN

has Filling Machines for every purpose

THE WHIZ-PACKER

PACKS ALL KINDS OF DRY, FREE-FLOWING PRODUCTS

- Adjustable for various package sizes.
- Telescoping of cups for controlled accuracy.
- Speed adjustable up to 50 packages per minute.



THE BAGBY MODEL D-1

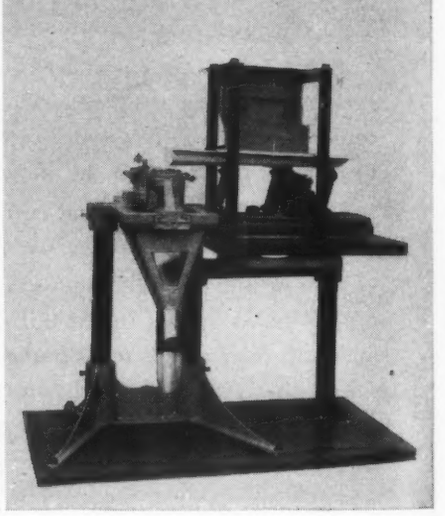
FOR ACCURATE, POSITIVE FILLING OF "WET" PRODUCTS

- One operator controls 24 measured discharges per minute.
- Finger tip adjustment of discharge volume.
- Continuous automatic operation.

THE WEIGH-RIGHT NET WEIGHER

FOR DRY PRODUCTS WHICH ARE DIFFICULT TO FEED

- Vibrator feeder adaptable to different size pieces prevents damage to product.
- Tolerance of 1/16 ounce or one to two pieces by count.
- Speed controlled from 20 to 35 discharges per minute.

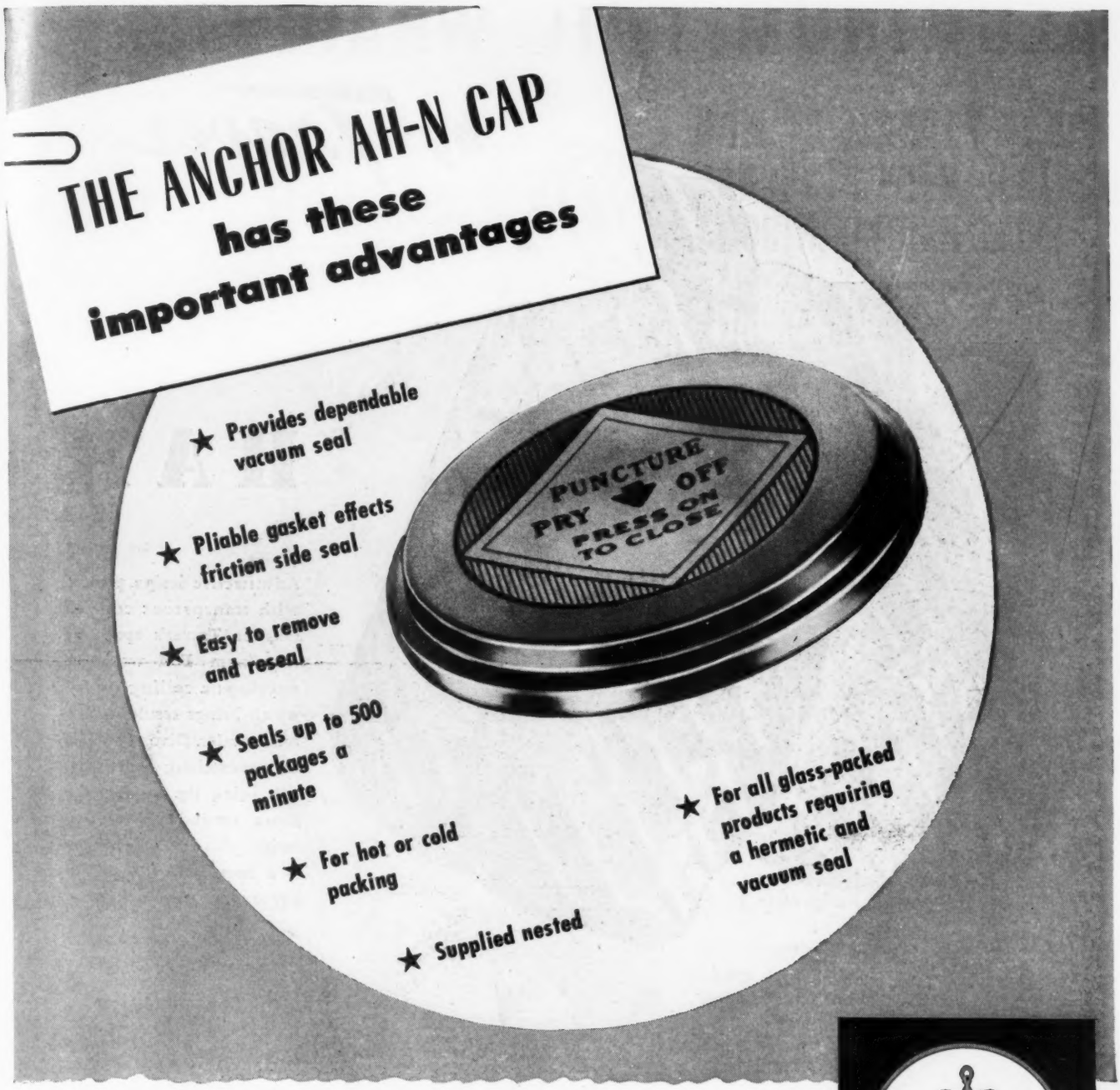


Whatever your packaging problem, consult Shumann. Send sample packages for prompt and expert technical advice.

SHUMANN EQUIPMENT COMPANY

1206 E. Carson St. **Pittsburgh 3, Pa.**

EVERYTHING IN PACKAGING


THE ANCHOR AH-N CAP
has these
important advantages
★ Provides dependable vacuum seal
★ Pliable gasket effects friction side seal
★ Easy to remove and reseal
★ Seals up to 500 packages a minute
★ For hot or cold packing
★ Supplied nested
★ For all glass-packed products requiring a hermetic and vacuum seal
PUNCTURE
PRY OFF
PRESS ON TO CLOSE

THE AH-N Cap is a one-piece hermetic closure that is adaptable to all types of glass packed products requiring a vacuum seal. It provides an efficient, dependable, tamper-proof vacuum seal and may be used on AH-N Finish bottles and jars with or without a pry-off ledge.

Its thick, soft, pliable gasket effects the seal on the side of the glass finish. The upper part of the container finish being tapered, unnecessary friction in cap application is eliminated. On Anchor sealing equipment the AH-N Cap can be hermetically sealed under steam vacuum at speeds ranging up to 500 per minute.

Because Anchor AH-N Caps are supplied nested, they stay clean until applied; coatings are protected; application is speeded up; space is saved by smaller cartons.

Housewives like containers sealed with the AH-N Cap because removal is so easy—and because the package can be effectively resealed to protect the contents until finally consumed.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

ALUMINUM FOIL WRAPPERS

by Traver . . .

HAM

An attractive design, printed with transparent colored inks on Traver's sparkling Aluminum Foil wrappers, develops a selling punch which brings results in any retail outlet. Give your ham an eye-catching attire that will bring the shopper up short, reminding her that inside this shiny package is a tasty, tender shank of her favorite ham.

When special seasons require extra sales appeal against competing brands, put *your* ham in this glistening wrap and watch the buyers' pocketbooks pay homage to its charm.

Stock designs (Tulip and Lily) are available for immediate delivery.

. . . and with the beauty of Traver Aluminum Foil wrappers, you are assured protective strength by heavy paper backing.

These photographs show Traver Aluminum Foil wrappers in actual use.

☆ WRITE OR WIRE—DEPT. M

Traver CORPORATION

358 W. ONTARIO STREET • CHICAGO 10, ILLINOIS

CONVERTERS AND PRINTERS OF FOIL, CELLOPHANE, PLASTICS, ACETATES AND GLASSINE

HOW TO MARKET YOUR PRODUCTS WITH CLEAN, SMOOTH, UNTORN LABELS

YOUR one best insurance toward an always clean, appealing package . . one that literally shouts aloud—"BUY ME, I'M BETTER"—is to entrust your label adhesive needs to PAISLEY. The swing in modern retail merchandising is toward self-service . . towards on-the-spot *impulse* buying. How necessary it is, then, to make certain that YOUR labeled packages look factory-fresh in the stores, with clean, smooth, untorn labels.

PAISLEY Can Labeling Adhesives are playing an increasingly important part in bringing products to market in perfect condition. If you want the ONE best can or jar labeling adhesive for a SPECIFIC operation, submit the facts to Paisley. Their skilled adhesive chemists will subject them to scientific laboratory analysis, then send you recommendations. This valuable service doesn't cost you a penny, nor does it obligate you to buy!

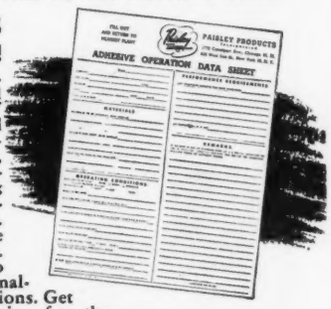
Here are some of the types of finer, field-tested adhesives developed by our scientific staff:

1. LUMP FORM HOT PICK-UP GUMS
2. COLD PICK-UP GUMS
3. LAP BELT PASTES
4. VARNISHED LABEL LAP PASTES
5. BOTTLE LABEL GLUES
6. MOISTURE-RESISTANT LABEL CEMENT
7. GRIP-TIGHT LABEL PASTE
8. SHIPPING CASE GLUES

Free Consulting Service for All Adhesive Users!

SEND FOR THIS DATA SHEET NOW!

There's a laboratory-developed, tested and controlled PAISLEY scientifically designed Adhesive for practically every fabricating, manufacturing, product labeling and sealing operation. Buy adhesives the scientific way. Send for an Adhesive Operation Data Sheet. Fill in and return it to our laboratory for analysis and recommendations. Get the ONE best adhesive for the SPECIFIC operation. Write today. There's no obligation.



VISIT OUR BOOTH NO. 207 AT THE PACKAGING EXPOSITION . . PHILADELPHIA . . APRIL 8TH TO 11TH, 1947!

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL., PHONE CANAL 2220 ★ 630 W. 51st ST., NEW YORK 19, N.Y., PHONE COLUMBUS 5-2750

PACKARD

makes the Rounds

We're talking about containers, naturally: Packard makes round containers when, as and how you need them.

Making the rounds of this page, you'll note that Packard makes all conceivable sizes and shapes of spiral-wound round tubes and containers. Open tubes, closed tubes, flat drum-shape containers, long, thin, short, squat—just name your length and diameter. Packard makes 'em with metal ends or paper caps, plain or labelled. If you're labelling your container, design and color possibilities are infinite! Moreover, these sturdy but lightweight packages *look* expensive but actually are manufactured at low cost—sell at low cost.

Round Packard containers are, therefore, perfect for any dry commodity: foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles. And the best thing about Packard containers is that they're available and can be shipped promptly. Consult us on any of your container problems, your inquiries will be welcomed and will receive immediate attention.

PACKARD CONTAINER CORP.

5811 Park Avenue West New York, New Jersey
Phone Union 5-5818

Dress Up Your Package in

Champion Kromekote

THE CHAMPION PAPER AND FIBRE COMPANY · HAMILTON, OHIO

District Sales Offices: NEW YORK · CHICAGO · PHILADELPHIA · DETROIT · ST. LOUIS · CINCINNATI · ATLANTA · SAN FRANCISCO

Packaging Show

HAZEL-ATLAS GLASS CO.
Wheeling, W. Va.

The Packaging Show will be in Philadelphia the week of April 8th and you are cordially invited to visit our exhibit. But your product has a packaging show of its own every day in the year when you use H-A containers. On dealers' and home-makers' shelves these glistening containers are your selling packages.

COMING AT YOU—
PLASTIC MOLDED JAR CLOSURES
A DIVERSITY OF COLORS, STYLES AND SIZES INCLUDING STANDARD 33, 38, 43, 45, 48, 51, 53, 58, 63, 70, 83 and 100 MM.
Right Now! That's when we can make delivery on these smart, gem-like molded closures—for jars, bottles and other containers. Probably no need to tell you, too, that they're durable, easy to apply, rustless, and resistant to oils, chemicals and corrosives. You, as well as your dealer, know from past experience how good Mack plastic closures are, and how they enjoy wide consumer acceptance. The important thing right now is that you can get them RIGHT, and you can get them NOW! Samples and quotations on request; write to Mack Molding Company, Inc., 160 Main Street, Wayne, N. J.
Mack MOLDED EXCELLENCE
M
SALES OFFICES: NEW YORK CITY, CHICAGO, DETROIT, INDIANAPOLIS BOSTON, ST. LOUIS

Do you have this **BALANCE** *in your package?*

IT'S a *combination* of important advantages that makes Du Pont Cellophane the balanced packaging material. There's transparency for the sake of sales . . . moistureproof protection for the sake of quality —and for economy's sake, *low cost.* Your package needs this balance!

We hope the day will soon come when converters and ourselves can meet all requirements for Cellophane. In the meantime, let us work with you on your future packaging plans. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Del.

YOU STRIKE THE RIGHT BALANCE WITH DU PONT

REG. U. S. PAT. OFF.

Cellophane

Shows what it Protects—at Low Cost

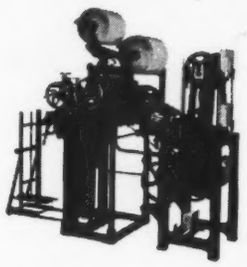
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

INCREASE YOUR PROFITS WITH PETERS PACKAGING MACHINES

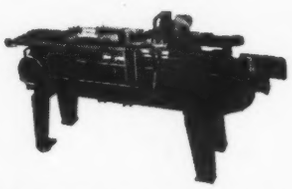
Are you overlooking the possibilities of machine operations in your packaging department? If you are now setting up and closing your cartons by hand, it will pay you to investigate the use of Peters economical packaging machines to eliminate hand methods.

Peters automatic and semi-automatic units are showing substantial savings in many industries formerly using hand labor. Let us show you how they can speed up your production schedules, reduce your labor costs and increase your overall profit.

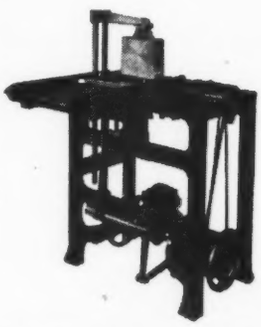
Send us samples of the cartons you are now using. We will be pleased to send you complete information on the most economical and efficient units to meet your requirements.



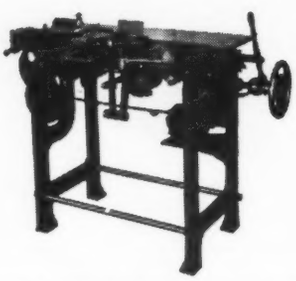
SENIOR FORMING AND LINING MACHINE. Sets up 55–60 cartons per minute. Fully automatic.



SENIOR FOLDING AND CLOSING MACHINE. Closes 55–60 cartons per minute. Fully automatic.

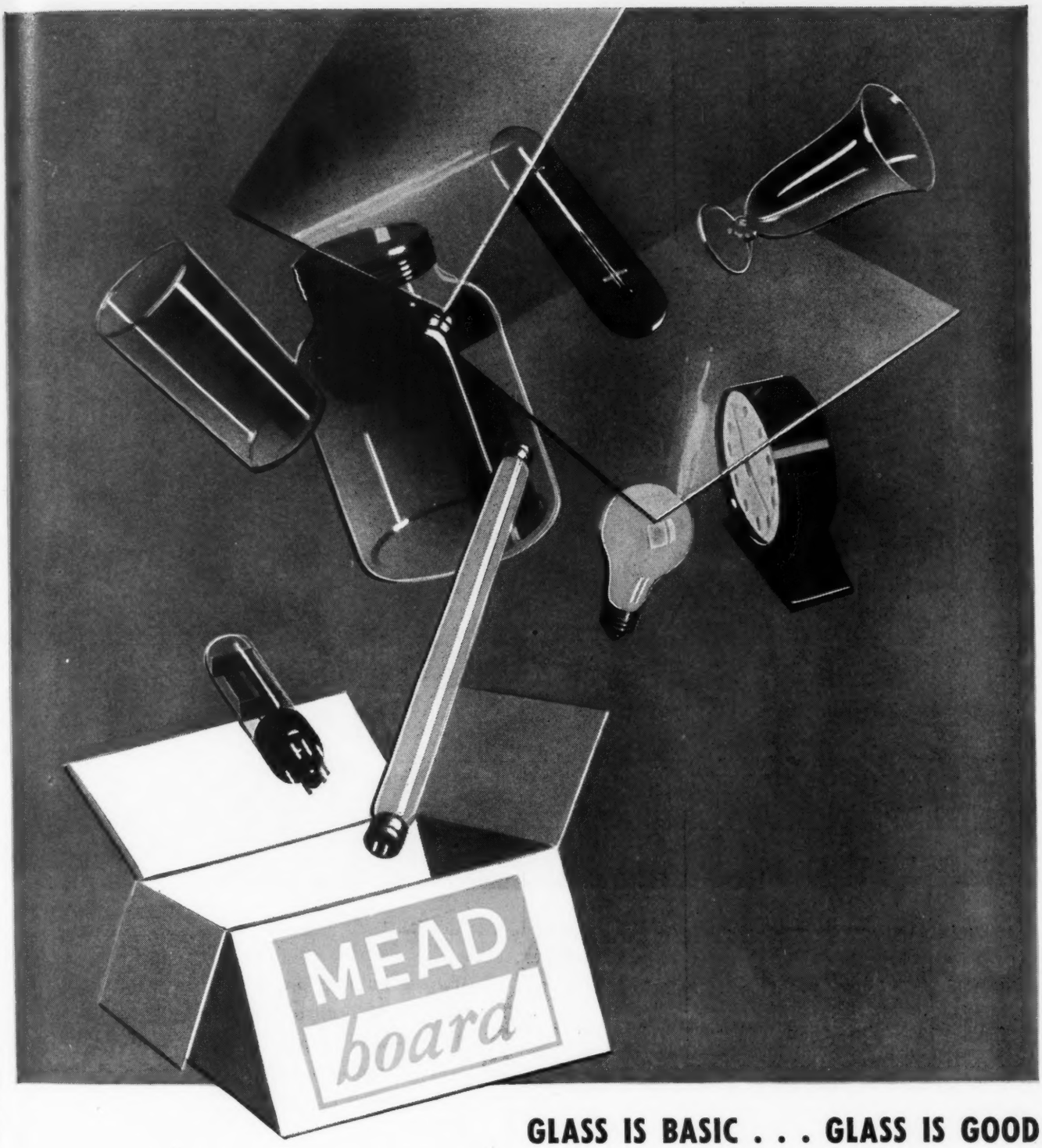


JUNIOR FORMING AND LINING MACHINE. Sets up 35–40 cartons per minute. Requires one operator.



JUNIOR FOLDING AND CLOSING MACHINE. Closing 35–40 cartons per minute. Fully automatic.

PETERS MACHINERY CO.
4700 Ravenswood Avenue, Chicago, Illinois



GLASS IS BASIC . . . GLASS IS GOOD

Few other industries have done so much to improve the everyday life of man: tumblers that won't break . . . broken glass that won't cut . . . glass that invites the sun in and glass that waves it away . . . yes, and even fertilizers made of glass.

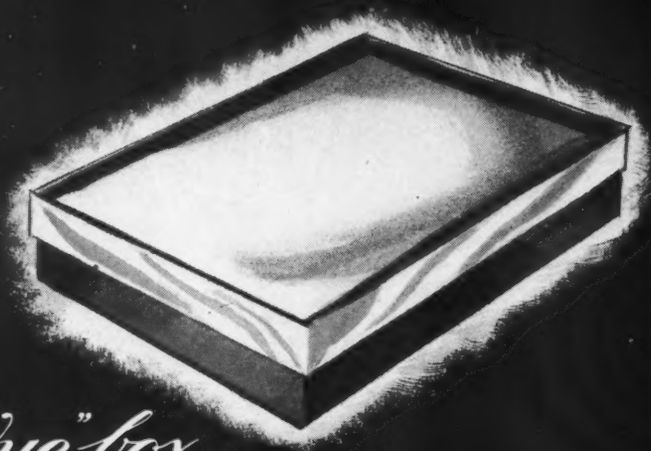
Glass manufacturers fret over the shortage of soda ash and moan over the thin trickle of sturdy containers in which to ship their sometimes deliberately fragile products; yet, in spite of obstacles, they turned out in 1946 more than $500,000,000 worth of glass in all its useful shapes and forms. In 1947 this output may be doubled.

MEAD BOARD is expanding its facilities to help this industry, as it has helped countless others. With its reputation for building .009 Chestnut corrugating for the strongest containers, MEAD can help you with modern packaging problems. Twenty years' experience in the manufacture of corrugating materials made from hardwood fibres is behind MEAD BOARD, now sold direct by Mead Board Sales, Inc.

MEAD BOARD SALES, INC. 3351 MADISON ROAD, CINCINNATI 9, OHIO

PERFECTION

A fine watch



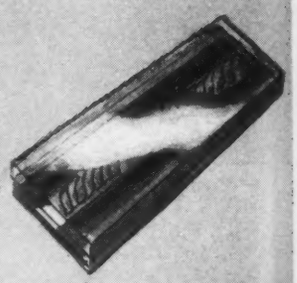
A "Trans-Vue" box

Like a truly fine watch, "Trans-Vue" boxes, by the American Transparent Box Co., are precision-constructed . . . handsome.

Designed by men who combine imagination with practical salesmanship, "Trans-Vue" boxes are created to spur volume sales . . . inspire impulse buying. High-speed, large-scale production means economy, too—savings that are passed on to you.

Put your products in "Trans-Vue" boxes—to assure a steady volume of business at *reduced unit costs.*

Latest number in the American Transparent line is a transparent watch band box, with a soft pad and two sturdy hinges—providing effective, *economical* display.



Boxes delivered from stock or to your specifications. Prompt attention to all inquiries. Write or phone.

American TRANSPARENT BOX CO., INC.

MANUFACTURERS OF *"Trans-Vue"* PATENTED CONSTRUCTION

REG. U. S. PAT. OFF.

PHILADELPHIA OFFICE:
1016-1018 Hamilton Street
Philadelphia 23, Pa.
POplar 5-8699

New York Representative:
P. PUCHKOFF & SONS, INC.
220 Kosciusko St., Brooklyn 16, N. Y.
NEvins 8-8100

Glass

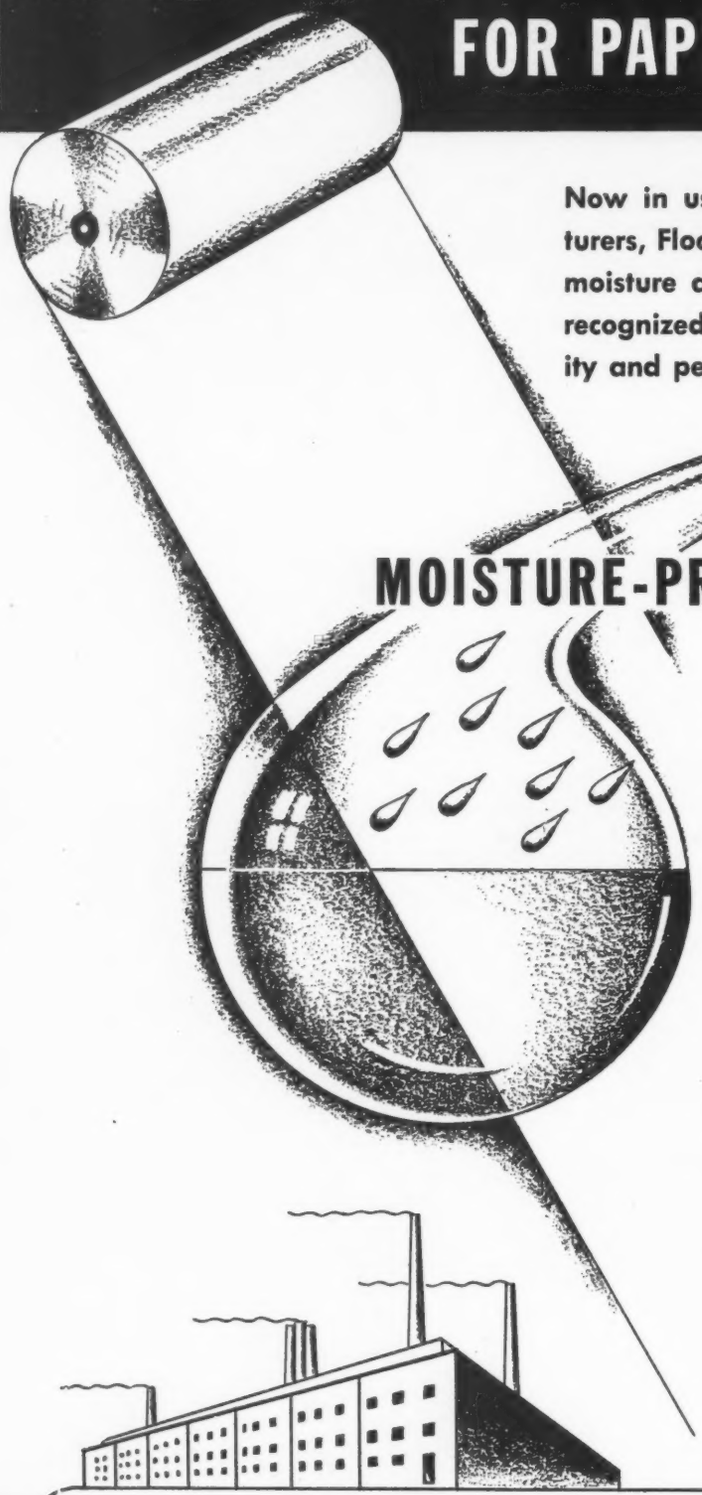
ADAPTABLE TO A WIDE VARIETY
OF CLOSURES . . .

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •

INVISIBLE GLASS COMPANY . . . VINELAND, N. J.

TESTED and PROVED SYNTHETIC COATINGS FOR PAPER and CLOTH



Now in use by a number of leading manufacturers, Flood & Conklin coatings for heat-sealing, moisture and grease-proofing and adhesion are recognized nationally as top standard for quality and performance.

MOISTURE-PROOF COATING #173

A fine moisture-vapor-proof coating especially designed for food, tobacco and other products. Moisture-vapor transmission as low as .1 grams per 100 sq. inches in 24 hours — 90 R.H. (Southwick cabinet). Test run on coating of 1 lb. of solids per 1000 sq. feet. Moisture-proof coating #173 is both heat sealing and non-toxic.

Special adhesives — Acetate to Acetate, Acetate to Paper, Aluminum Foil to Paper, Aluminum Foil to Aluminum Foil.

Laboratory facilities are available to all industries in the development of specialized coatings for specific requirements.

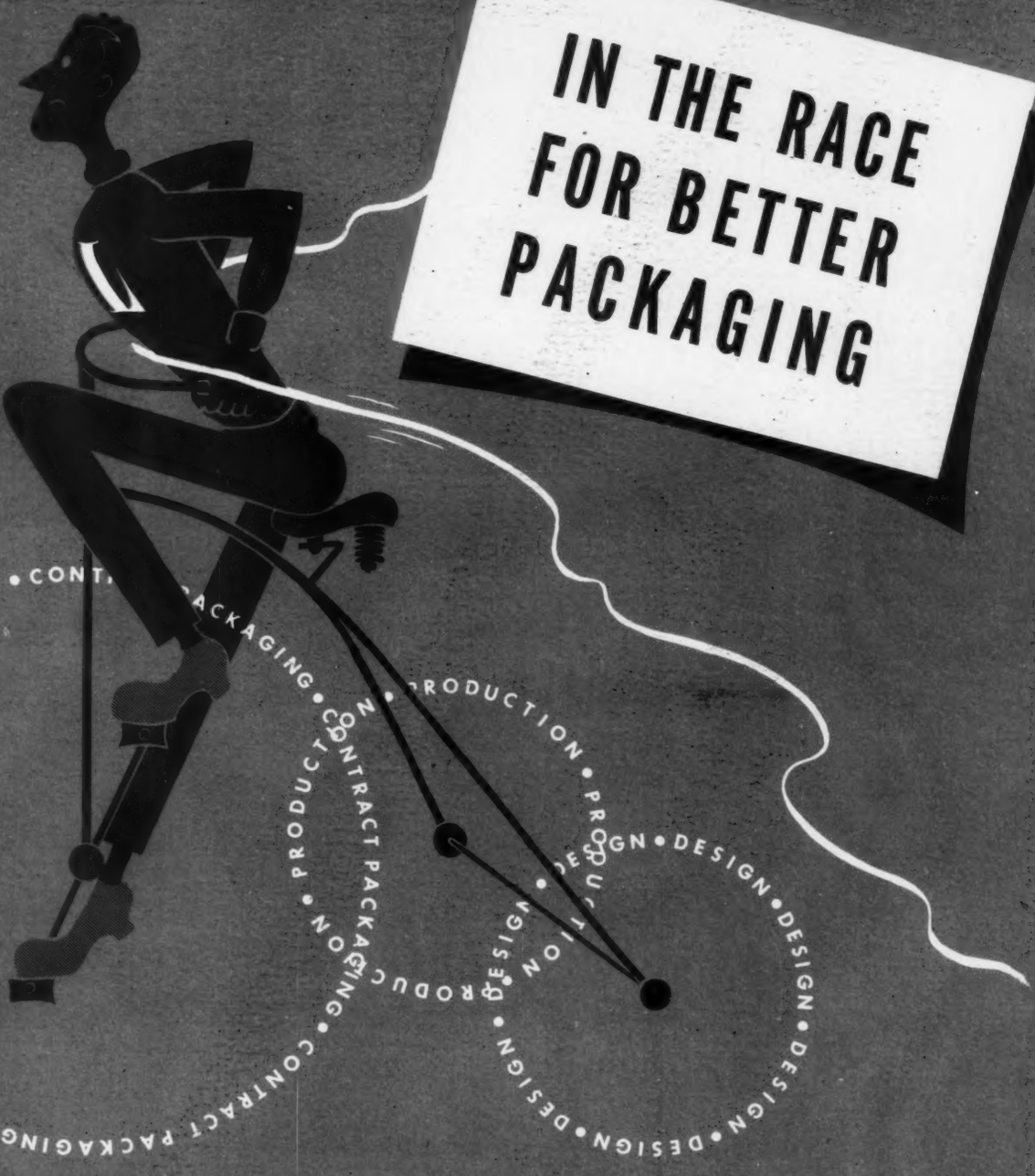
FLOOD & CONKLIN MFG. CO.

Coatings of Scientific Reliability

NEWARK 5, NEW JERSEY

LEEDS LEADS...

IN THE RACE FOR BETTER PACKAGING


CONTRACT PACKAGING • CONTRACT PACKAGING • CONTRACT PACKAGING • CONTRACT PACKAGING
PRODUCTION • PRODUCTION • PRODUCTION • PRODUCTION
DESIGN • DESIGN • DESIGN • DESIGN • DESIGN • DESIGN

COMPLETE PACKAGING SERVICE

CONTRACT PACKAGING

30,000 square feet devoted exclusively to customer service. Our mechanical equipment includes "Trans Wrap", Cellophane Wrappers, Bag, Powder, and Bottle Fillers, Labellers. We can efficiently and economically compound, assemble, package and ship your merchandise. Let us relieve you of your production problems.

PRODUCTION

We can promptly deliver set up boxes; lithographed labels, box wraps and folding boxes; bags made of cellophane, glassine, foil and paper; laminated films for special packaging and die cut forms for any other unusual application.

DESIGN

Our Design Department will create a blending of rich color, texture, and smooth line that will give your merchandise sales appeal. We will design for production by your box, label or package maker, or for production by our organization.

LEEDS SALES CO., INC. *Specialty Package Division*
34 WEST 34 ST., NEW YORK 1, N. Y. ★ PENN 6-9670

Got an Important Message to Add to Your Label?

...ANOTHER REASON FOR CEL-O-SEAL

REG. U. S. PAT. OFF.

A message, totaling 8 words, is prominently displayed on the Du Pont "Cel-O-Seal" band that safeguards VI-PENTA Drops 'ROCHE'.

Let "Cel-O-Seal" bands do an *all-round* job for you . . . provide an eye-catching second label . . . guard against evaporation, leakage and substitution. They come in a wide range of colors —are easily applied. E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

DU PONT "CEL-O-SEAL" BANDS

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT
REG. U. S. PAT. OFF.

Let TUPPER *show you how to do* BIG THINGS *with* LITTLE PACKAGES *for re-use*

Here comes Tupper again with another modern packaging smash designed to increase your profits. Tupper's best seller plastic cigarette cases, long famous for style quality and value, lend themselves to packaging such items as women's stockings, fly-tieing kits, playing cards, for instance. They are attractive, transparent, and available in eye-catching, jewel-like colors of ruby, amber and crystal. And what's more, men and women alike appreciate these quick loading, snug sealing, telescope top cases for re-use in a big way. The sleek Queen holds king as well as regular size packs, and the popular Sport has a built-in match pocket. Stay out front and cash in with these modern, double-barreled packaging sensations as a short cut to greater sales and profits.

TUPPER PLASTICS, INC., Farnumsville, Mass.

New York City Office: 225 Fifth Ave. • Can. Address: Hindavid, Reg., 116 St. Paul St. W., Montreal, P. Q.

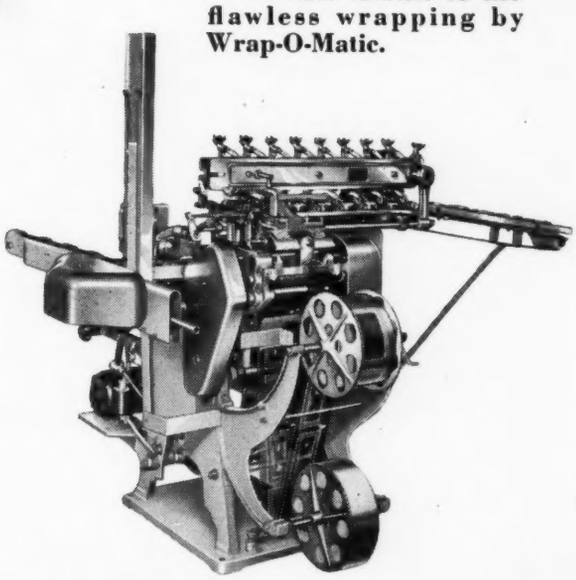
These Three WRAP-O-MATIC folders

illustrate and detail the 4 Wrap-O-Matic models for wrapping *Regular, Fragile, Irregular shaped,* and *Multiple piece* Confectionery and Bakery products.

Write for your copy today.

Wrap-O-Matic
Packaging Equipment

For wrapping candy bars, biscuits, and cookies. Wrap-O-Matic is the most popular Wrapping machine in the Confectionery and Bakery field . . . a real tribute to the flawless wrapping by Wrap-O-Matic.



See Wrap-O-Matic on Display at the A.M.A. Packaging Exposition — Philadelphia Convention Hall, April 8-11, Booth No. 2.

Lynch Package Machinery Corporation

TOLEDO 1, OHIO, U. S. A.

PLAN YOUR PRODUCT PACKAGE CAREFULLY

PROVEN PERFORMANCE with our hundreds of customers and thousands of products, our many years of successful production need no comment.

●

Production CAPACITY that is automatically fast in operation, backed by ample equipment, enables us to excel in meeting delivery deadlines.

●

QUICK, CONSTRUCTIVE ACTION on inquiries. When you write, wire or phone, you will know at once whether we can be of service. Address us care of our Creative Design Dept.

AS THE *Smart* *Tourist* PLANS HIS TRIP

He adds to the pictures in his mind of places he wants to see . . . the practical experience and knowledge of the Travel Bureau.

●

SO with the skillful manufacturing executive of today. He has a vision born of new marketing possibilities and needs. As he takes it to the proper source of idea collaboration, his Dream and our Practical Production Experience become successful partners.

●

The Creative Design Dept. of The Cleveland Container Company has earned a national reputation of giving such inquiries valuable assistance . . . in producing packages that are ideal from every viewpoint.

SMART PACKAGE APPEAL

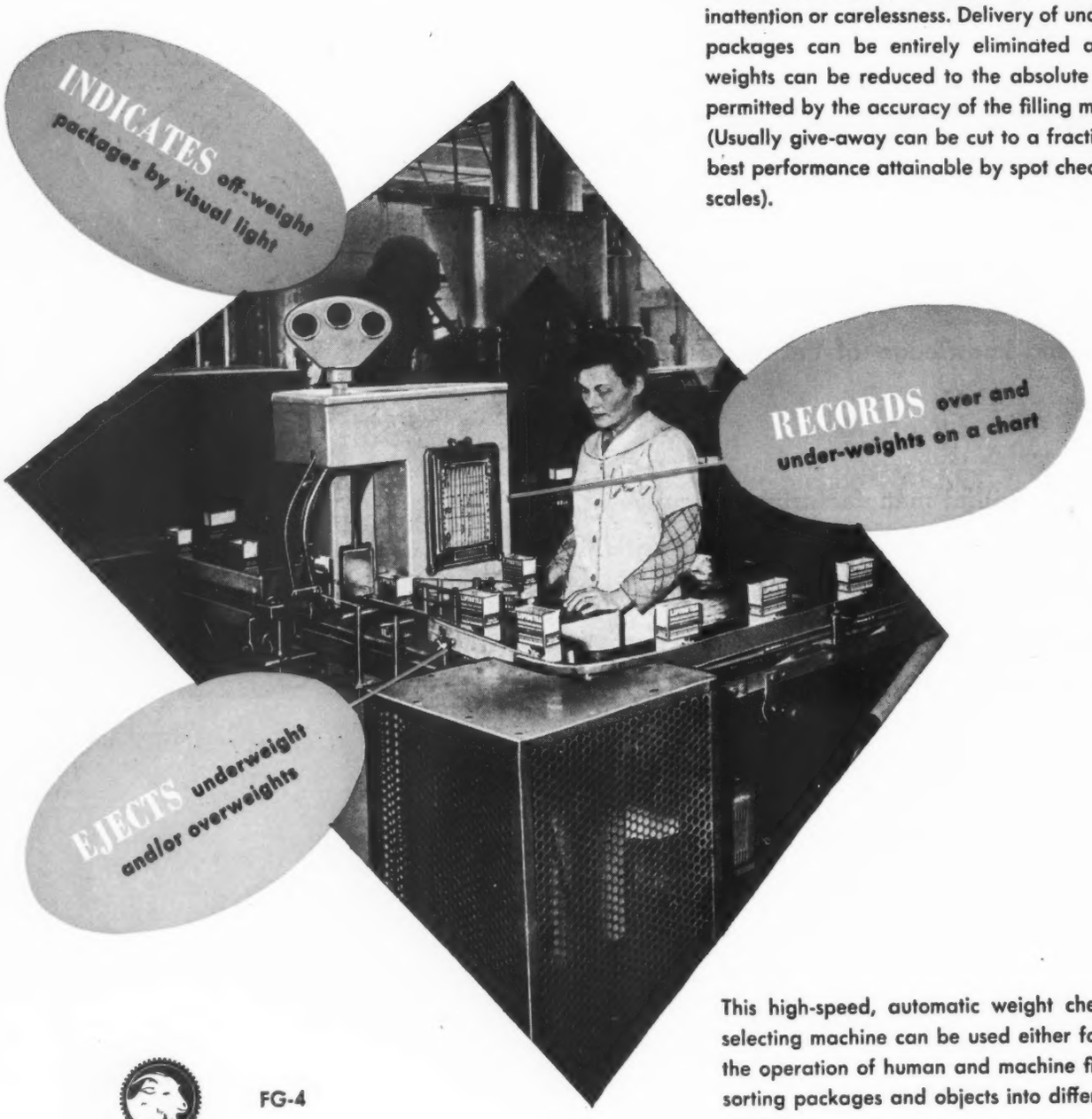
All-Fibre Cans
Combination Metal and Paper Cans
Spirally wound Tubes and Cores for All Purposes
Plastic and Combination Paper and Plastic Items.

See our Exhibit Booth 513 AMA Packaging Exposition

The CLEVELAND CONTAINER Co.
6201 BARBERTON AVENUE CLEVELAND 2, OHIO
PRODUCTION PLANTS also at Plymouth, Wisc., Ogdensburg, N. Y., Chicago, Ill., Detroit, Mich., Jamesburg, N. J.
PLASTICS DIVISIONS at Plymouth, Wisc., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland, Ohio
New York Sales Office—1186 Broadway, Room 223
IN CANADA—The Cleveland Container Canada Ltd., Prescott, Ontario

New Electronic Weight Checker Cuts Packaging "GIVE-AWAY" TO ABSOLUTE MINIMUM

Placed in the package conveyor line, the Weightrol provides a continuous, automatic and accurate check-up of package filling with an accuracy of 1/64 oz. at speeds up to 120 per minute. Its infallible accuracy is unaffected by human fatigue, inattention or carelessness. Delivery of underweight packages can be entirely eliminated and overweights can be reduced to the absolute *minimum* permitted by the accuracy of the filling machinery. (Usually give-away can be cut to a fraction of the best performance attainable by spot checking with scales).


INDICATES off-weight packages by visual light
RECORDS over and under-weights on a chart
EJECTS underweight and/or overweights

FG-4

This high-speed, automatic weight checking and selecting machine can be used either for checking the operation of human and machine fillers or for sorting packages and objects into different weight groups.

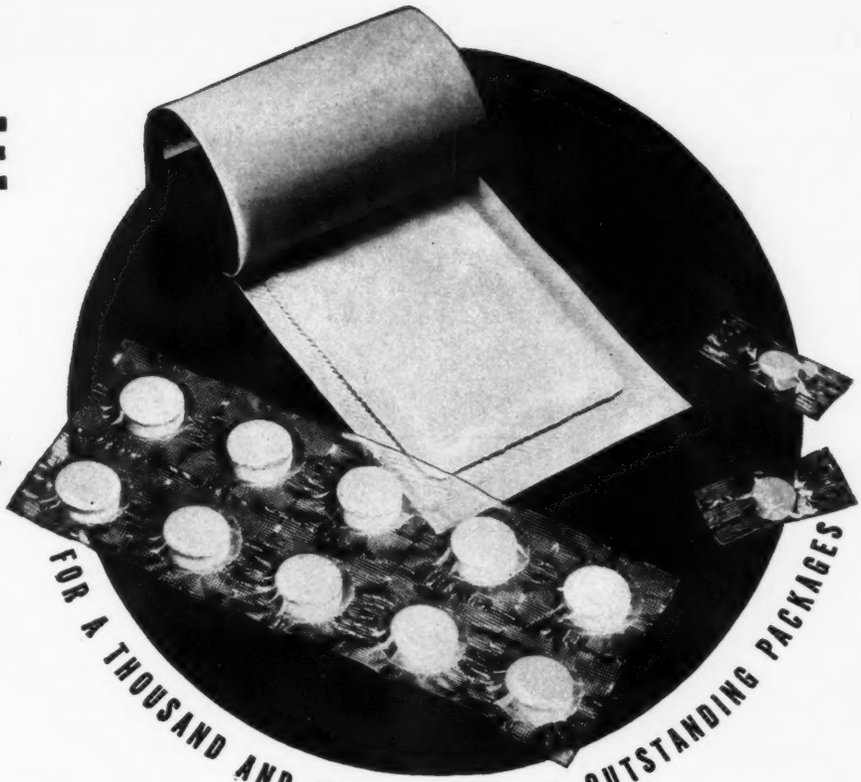
Send for literature.

The FRED GOAT CO., Inc.

ESTABLISHED 1893
314 DEAN STREET • BROOKLYN 17, N. Y.

*SANITAPE--SEALTITE

Superior Packaging



THIS patented method of packaging pills, tablets, creams and liquids has never been equalled since its creation by us. The reason for this continued superiority of Sanitape-Sealtite is clearly indicated by consideration of the basic advantages.

PROTECTION is inherent in the method—sealing each unit or unit-dose in its own air-tight compartment affords the most complete protection known—protection not only against dirt, and germs, but against handling, breakage, moisture and changes of temperature.

CONVENIENCE is an obvious advantage of Sanitape-Sealtite—single units or unit-doses, wrapped singly for prescribed usage. The unit-packaged product is convenient to use, to carry (in vest pocket or hand-bag) to keep (in drawer or medicine cabinet).

ECONOMY of Sanitape-Sealtite packaging merits careful consideration—it is not only that less expensive packaging materials are used and that handling and shipping weights are greatly reduced—in addition you have the advantage of our Contract Packaging Service.

ATTRACTIVENESS is a powerful sales appeal—Sanitape-Sealtite has it. Clean, neat and crisp, it bespeaks an ethical attention to detail which is inviting and reassuring. This feature of Sanitape-Sealtite will afford an incalculable advantage in the competitive days ahead.

Consider one of the units above—Sanitape or Sealtite or Powder Package—think of it as a mailing sample, a dispensing sample or part of a standard-sale package of practically any capacity. Picture it packaged with a single cover, double cover, catch-board folder or in a container of almost any size or shape—then outline your problem and ask us for pertinent details. Sanitape-Sealtite Packaging is indeed Superior Packaging, and may play an important part in your future plans.

CONTRACT PACKAGING SERVICE in our 100,000 square feet of light, air-conditioned space, equipped with every modern labor-saving device, we have a capacity up to 8,000,000 units daily—this volume, together with our concentration on unit packaging exclusively, affords the manufacturer important saving, and relieves him of every packaging detail. Here we (a) Receive your product in bulk (b) Store in bonded ware-rooms (c) Package by Sanitape-Sealtite (d) Insert literature if desired (e) Return finished packages to you, or drop-ship according to your instructions. We act as *your packaging department.*

UNIT PACKAGING

IVERS-LEE COMPANY

NEWARK • NEW JERSEY

*Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment, assuring convenience, protection and maintained efficacy.

AMERICA'S #1 SOURCE FOR PLASTIC CONTAINERS

Do the best brains in your business know this about packaging?

riboflavin, niacinamide, pyridoxine, calcium pantothenate, ascorbic
yeast, fish liver oil concentrate, natural mixed tocopherols, minerals,
calcium phosphate, iron (ferric) phosphate, copper carbonate, potas-

Celluplastic has the world's finest facilities for producing containers that are seamless • semi-rigid or rigid • shatterproof • 1/5 the weight of glass • in any color, opaque or transparent • imprinted with multi-color labels right in the manufacturing process • shaped like vials, boxes, cans, bottles • shipped without breakage at lowest cost of any container material of similar purpose.

You have not done justice to your packaging problem until you have talked to Celluplastic, "the best place for plastics." Your letter will command the prompt attention of the best engineering and designing brains in the industry.

Celluplastic Corporation

46 AVENUE L, NEWARK 5, N. J.

New York Office: 630 Fifth Ave. • West Coast: Container Service Co., Los Angeles 27, Cal.

PLASTIC CONTAINERS and PLASTIC PRODUCTS

IT'S THE *Finish* THAT COUNTS

-and

MIDWEST IS FIRST

IN SMOOTH FINISH SEAL and LABEL STOCK

Lustrous aluminum foil firmly laminated to coated paper gives that SMOOTH finish which every printer knows is so necessary to produce QUALITY seals and labels . . . Stocks available in 45 lb. and 60 lb., gummed and ungummed, in all surface finishes. Also light weight paper for automatic labeling machines as well as cover stocks and heavy gauge metals for all purposes.

Samples in rolls or sheets on request.

To protect—to sell—use FOIL

MFC.

MIDWEST FOIL COMPANY · 519 ZANE ST., LOUISVILLE 3, KY.

Built into every Ace Carton creation are the characteristics of sound design and construction principles . . . and this is not accidental; it is the result of careful study and application.

The packaging that *attracts* is the packaging that *sells!*

ACE CHICAGO Creators

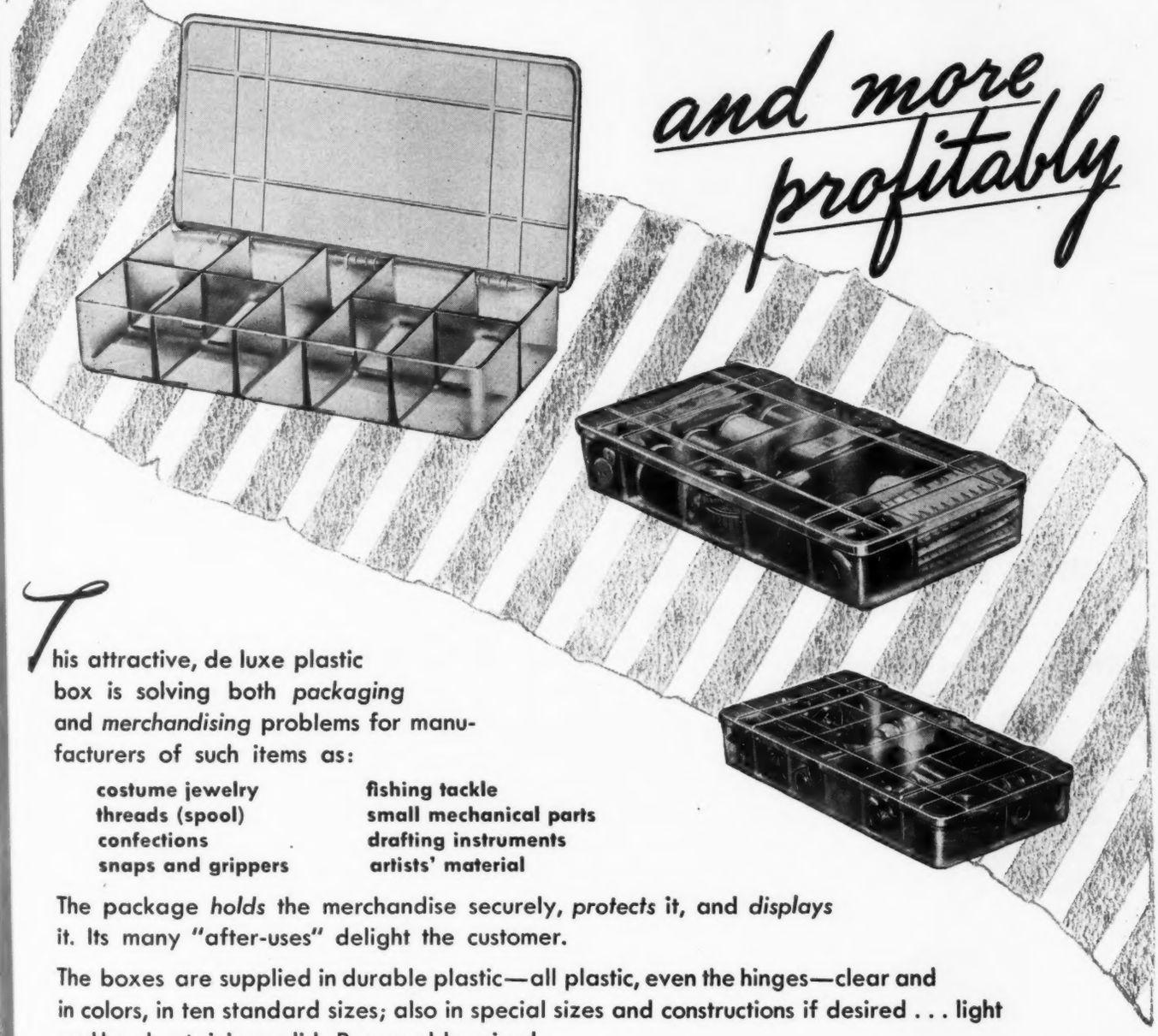
ACE CARTON CORPORATION

FOLDING PAPER BOXES • FOLDING DISPLAY CONTAINERS

5800 WEST 51st STREET, CHICAGO 38, ILL. • TELEPHONE CRAWFORD 0111

Packaged this way Items Sell Better...

and more profitably



This attractive, de luxe plastic box is solving both *packaging* and *merchandising* problems for manufacturers of such items as:

costume jewelry	fishing tackle
threads (spool)	small mechanical parts
confections	drafting instruments
snaps and grippers	artists' material

The package *holds* the merchandise securely, *protects* it, and *displays* it. Its many "after-uses" delight the customer.

The boxes are supplied in durable plastic—all plastic, even the hinges—clear and in colors, in ten standard sizes; also in special sizes and constructions if desired . . . light and hard, retaining polish. Reasonably priced.

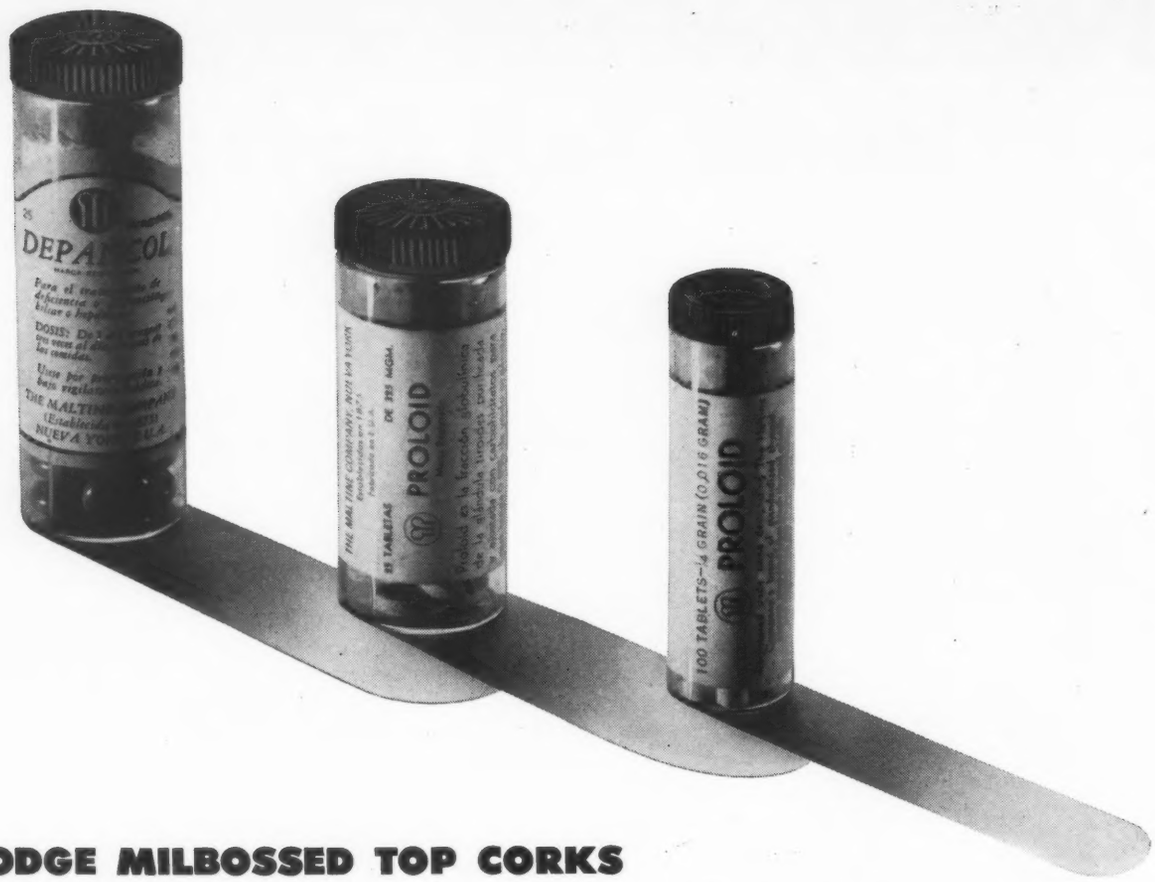
Write for prices in the quantity and construction preferred, telling us the kind of merchandise to be carried so that we can quote you and write you fully.

Model	Size	Compartments	Arrangement
A	8¼ x 4¼ x 1¼	18	
B	8¼ x 4¼ x 1¼	12	
C	8¼ x 4¼ x 1¼	7	
D	8¼ x 4¼ x 1¼	1	
E	7 x 3½ x 1⅜16	9	
F	7 x 3½ x 1⅜16	5	
G	7 x 3½ x 1⅜16	1	
H	4½ x 2¾ x 1	6	
I	4½ x 2¾ x 1	4	
J	4½ x 2¾ x 1	1	

PLASTICS DIVISION

The VLCHEK TOOL COMPANY

3001 East 87th St. • Cleveland 4, Ohio



DODGE MILBOSSED TOP CORKS

Guardians of an Established Name

The products of the Maltine Company have long been esteemed by the medical profession. When doctors prescribe these quality pharmaceuticals, they know that the contents of each bottle conforms to the highest standards. Significantly, for cork closures, the Maltine Company has chosen Dodge Milbossed Top Corks for safe sealing.

An airtight package is always assured with Dodge Milbossed Top Corks. Easily removed, replaced easily, they reseal perfectly. These closures are expertly made of uniform, high grade natural cork and joined to sturdy hardwood tops . . . distinctively styled to add individuality to a package. Embossed with a name or monogram, they win instant recognition on retailers shelves.

Dodge Milbossed Top Corks are available in standard or special patterns . . . in a diversity of sizes and colors. Tell us your requirements.

DODGE CORK COMPANY, INC., LANCASTER, PA.

DODGE CORK CLOSURES

designed to Guard the Integrity of the Contents

ARENCO Cigarettes
PIPE TOBACCO
ARENCO MACHINES
known the world over are precision-built for hundreds of uses among which are:
cigarette making
cigarette packaging
tobacco packaging
package bundling
jar filling
cigar, cigarillo and little cigar making
collapsible tube filling
soda straw wrapping
case sealing
packaging of flour, sugar, coffee, etc.
ice cream cup filling
check weighing
fish cleaning
TWO POUNDS FLOUR
ARENCO
SODA STRAWS
ARENCO MACHINE COMPANY
INCORPORATED
25 WEST 43rd STREET
NEW YORK 18, N. Y.
Ice Cream
Tooth-Paste
COLD CREAM

"Geo. V. Clark packaging OUTSIDE means QUALITY inside"

Quality fishing line by Norwich Line Co., Inc. packaged in a Geo. V. Clark "See-Thru" container.

Cast YOUR *Line for Quality Packaging*

Show what you sell! You'll "reel" in bigger volume with a package that displays your product to the best advantage.

The Geo. V. Clark Co. are pioneers in packaging of rigid transparencies. Here, 60 years of custom craftsmanship, expert processing of materials, specialized machinery, and knowledge of your problems, insure the quality and workmanship that produce the best in packaging.

So call on Geo. V. Clark with confidence! Let our experts . . . create a package that's designed to *sell* your product . . . take your finished design and manufacture to your exacting specifications. We'll do either or both! Get the facts without obligation by mailing the coupon.

CUT OUT AND CLIP TO YOUR LETTERHEAD

GEO. V. CLARK CO., INC.
SEE-THRU DIVISION
26-15 FOURTH STREET, ASTORIA 2, L. I., N. Y.

Gentlemen: I am interested in having more information and samples of your work.

NAME _____
FIRM _____
ADDRESS _____
CITY AND STATE _____

GEO·V·CLARK
COMPANY, INC.
See-Thru Division
26—15 FOURTH STREET, ASTORIA 2, L. I., N. Y.

Name Your Package Printing Problem

HYDRY Quick-Dry and Odorless moisture-set inks are solving package and wrapper printing problems on various grades of paper and board for many manufacturers. If you have printing ink troubles, send for the HYDRY booklet at once. It's a condensed explanation of what HYDRY Inks do . . . where they are used . . . their color brilliancy and color ranges . . . and why they save so much time, money and worry.

CHECK YOUR PACKAGE-PRINTING PROBLEM AGAINST HYDRY'S FEATURES:

- **Fast Drying**—Dries on most stocks in 10 to 30 minutes; on presses equipped with steam applicator, dries instantly!
- **Odorless**—Finished prints entirely devoid of ink odor.
- **Brilliant Colors**—Ink film reflects light, gives superior brilliance and cleanliness.
- **Non-Offset**—Possibilities of offset reduced to a minimum.
- **Non-Smear**—Dry-hard finish extremely resistant to rubbing and smearing.
- **Non-Crystallizing**—Can be overprinted, even after several weeks.
- **Sharper Printing**—Does not spread or bleed.
- **Folding Qualities Improved**—Affords better moisture content in paper stock.
- **Improves Heat-Sealing of Waxed Wrappers**—Will not mix with wax film during heat-sealing operations.

SEE OUR EXHIBIT BOOTHS 22-23, PACKAGING EXPOSITION, PHILADELPHIA, APRIL 8-11, 1947

hydry

T.M. Reg. U.S. Pat. Off.

GENERAL PRINTING INK DIVISION

100 Sixth Avenue, New York 13, N. Y.

American Printing Ink • Eagle Printing Ink • Fuchs & Lang • Geo. H. Morrill • Pacific Coast Sigmund Ullman • E. J. Kelly Company • General Printing Ink Corporation of Canada, Ltd.

Sun CHEMICAL CORPORATION

Strange things are happening in "PACKAGE LAND"

Yes, though far removed from the acts that tickled a boyhood fancy, strange things are happening behind closed doors to produce better packaging materials for you.

Research has provided definite answers to some of the most puzzling problems of packaging, and the three products described here are outstanding examples of this progress.

AQUASTOP MP*

Originally designed and successfully used to protect finished machine parts from damage by corrosion, mold or fungus, AQUASTOP MP has given remarkable results when used in other applications. Use of Aquastop MP provides a "breathing package" with an MVT rate of as high as 10 grams per 100 square inches per 24 hours, preventing damage by condensation within the package due to temperature changes. It may be heat sealed or chemically sealed to give a positive waterproof seal as strong as the material itself. Aquastop MP is strong, resilient, scuff-proof, does not flow, crack, become tacky or lose flexibility over the range from —20°F. to 170°F., and remains waterproof indefinitely. Furnished in panels for case liners or pre-fabricated bags to your size specifications.

AQUASTOP FP*

Aquastop FP, while possessing qualities similar to Aquastop MP, is especially processed to provide a material that is non-toxic and odorless. Designed for packaging perishable products such as fresh fruits and vegetables, fish and other seafood, certain chemicals, and many other products shipped in bulk by air or ground transportation. It may be used as heat sealed bags or as case liners for wire bound boxes or crates. Permeable to "dry ice" gas emanations, but impermeable to water from water-ice, Aquastop FP is safe for sea level or altitude flying, protecting contents which it encloses without damage to other units in the same plane load. Drop a line to us stating your problem and we shall be glad to assist you in solving it.

M-V-BAR*

M-V-BAR is similar to Aquastop MP and FP in construction, but is essentially designed as a positive moisture vapor barrier possessing high strength and resistance under conditions of high relative humidity. M-V-BAR is designed for use under those conditions where rigid control of moisture or moisture content is of primary importance. M-V-BAR is finding wide acceptance in the packaging of certain chemicals, explosives and special papers. This material is furnished in panels for case liners or in pre-fabricated bags to your size specifications. M-V-BAR can be heat sealed or chemically sealed.

Ask us to show you how and why M-V-BAR can be as valuable to you as it has been to others. Just drop us a line and we shall be glad to send you complete information.

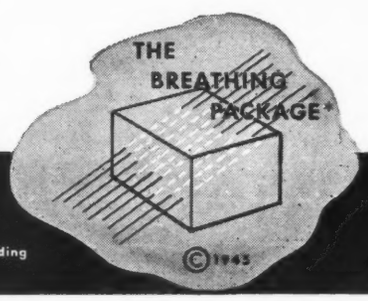
*Trademark Reg. U.S. Pat. Off.

Look us up at BOOTH 36 Packaging Exposition
April 8 to 11, 1947, Convention Hall, Philadelphia, Pa.

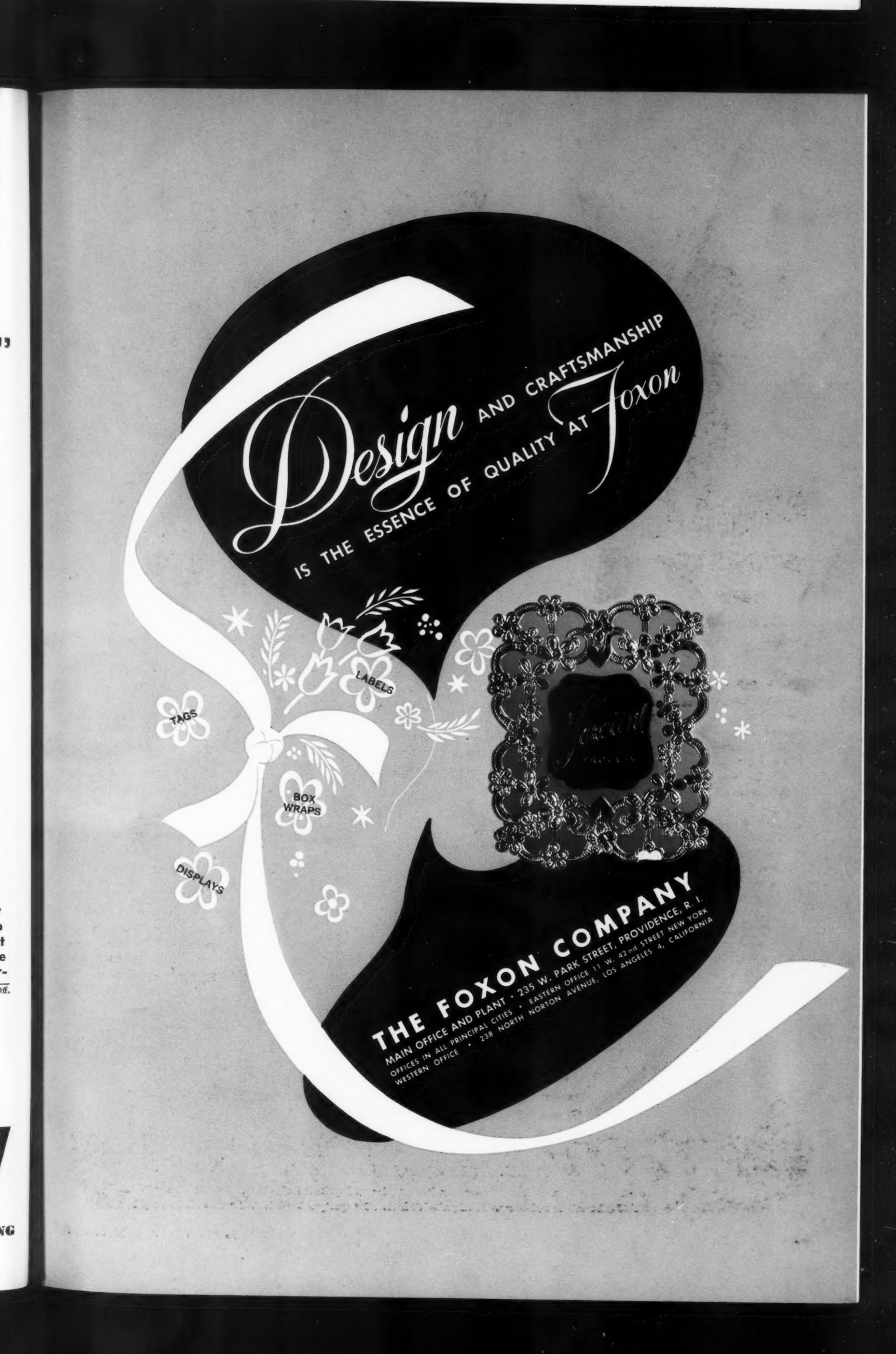
PROTECTIVE COATINGS CORPORATION

Manufacturers and Consultants

681 Main Street • Belleville 9, N. J.



AQUASTOP *Pat. Pending


Design AND CRAFTSMANSHIP
IS THE ESSENCE OF QUALITY AT Foxon
LABELS
TAGS
BOX WRAPS
DISPLAYS
THE FOXON COMPANY
MAIN OFFICE AND PLANT · 235 W. PARK STREET, PROVIDENCE, R. I.
OFFICES IN ALL PRINCIPAL CITIES · EASTERN OFFICE 11 W. 42nd STREET NEW YORK
WESTERN OFFICE · 238 NORTH NORTON AVENUE, LOS ANGELES 4, CALIFORNIA

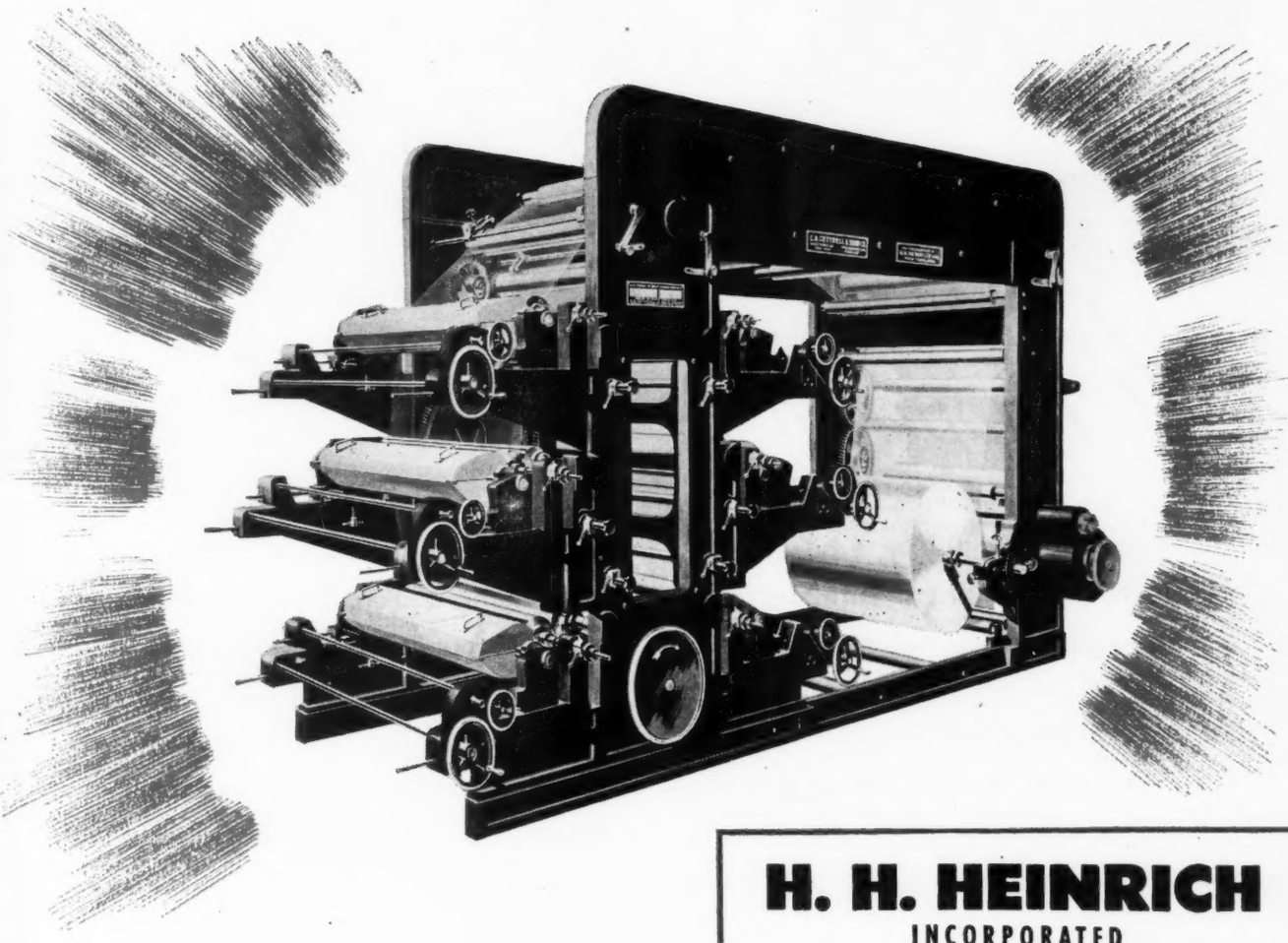
Opinions on Presses May Differ But Facts Never!

The Cottrell-Heinrich Converter MODEL "J" press, for multicolor aniline printing, embodies improvements unobtainable in other printing equipment.

Many important features developed through years of press manufacturing are inherent in the Converter Model ... all designed to produce better printing quality with greater printing economy, through precision operation.

C. B. Cottrell & Sons, leading printing press manufacturers, and H. H. Heinrich, Inc., pioneers in aniline printing, have joined their talents to produce this outstanding press. *Write for further information.*

... and the Cottrell-Heinrich has the Facts!



See Heinrich for the new revolutionary OPTI-CHEK, the machine which sets up color plates for perfect register in minutes!

H. H. HEINRICH
INCORPORATED

200 VARICK STREET, NEW YORK 14
Telephone: WOrth 4-9204

It happened next December

CLAIRVOYANCE would be a heaven-sent gift to the packaging committee as it strives to visualize all the conditions that will prevail during the Christmas buying season months ahead.

What happens next December interests us, too. We do a lot of projecting in not only package styling and production matters but in such related phases as overall economic and consumer market trends.

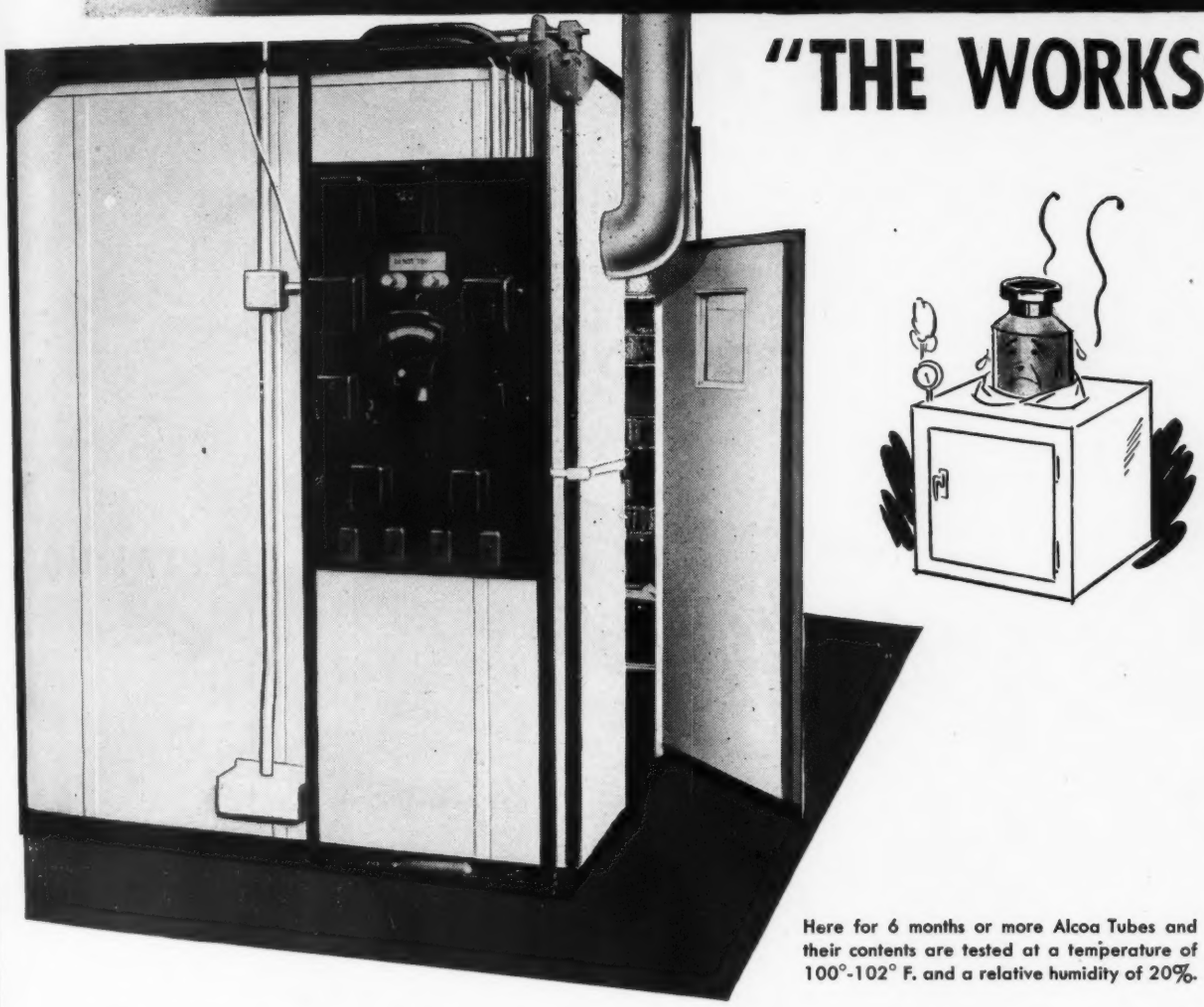
From our findings we develop sound packaging recommendations that are the "fourth dimension" of Heminway packages . . . the extra advantage Heminway customers enjoy when planning for future markets.

Heminway Corporation
Factory Waterbury, Conn.

30 Rockefeller Plaza
New York 20, N. Y.

ROUND BOXES · SETUP BOXES · NOVELTY BOXES · PAPER CANISTERS · CATALOG PRINTING · PAPER DRAWN PRODUCTS

This torture chamber gives tubes "THE WORKS"



Here for 6 months or more Alcoa Tubes and their contents are tested at a temperature of 100°-102° F. and a relative humidity of 20%.

Every product planned for packaging in Alcoa Aluminum Tubes gets "the works" in this and other specially designed equipment in the Alcoa Packaging Laboratory.

In the incubator shown above, Alcoa Aluminum Tubes and their contents are kept at a temperature of 100°-102° F. and a relative humidity of 20%. For weeks and months they are stored here. Every step is carefully checked; carefully controlled. After six months, tubes and contents have been subjected to conditions comparable to 3 years normal shelf life in an average retail store.

When the Alcoa Packaging Laboratory reports on the suitability of your product for aluminum packaging you know the information is accurately gathered; expertly evaluated.

Why not send samples of your product for testing now—for ordering later? We can advise you which type of Alcoa Tube, plain or interior coated, is best for your product. We also can advise you whether a slight change of formula or the addition of an inhibitor will reduce your packaging costs when more Alcoa Tubes are available.

Write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

MORE people want MORE aluminum for MORE uses than ever

ALCOA ALUMINUM

ALCOA ALUMINUM TUBES

DISPLAYS

PROTECTIVE

APPEALING

STRONG

R. T. G. CARTONS AND DISPLAYS
WILL GIVE YOU BOTH EYE APPEALING
SALES PUNCH AND OUTSTANDING PERFORM-
ANCE ON HIGH SPEED PACKAGE PRODUCTION LINES.

RICHARDSON TAYLOR

4501 WEST MITCHELL AVE.

CARTONS

BRIGHT

UNIFORM

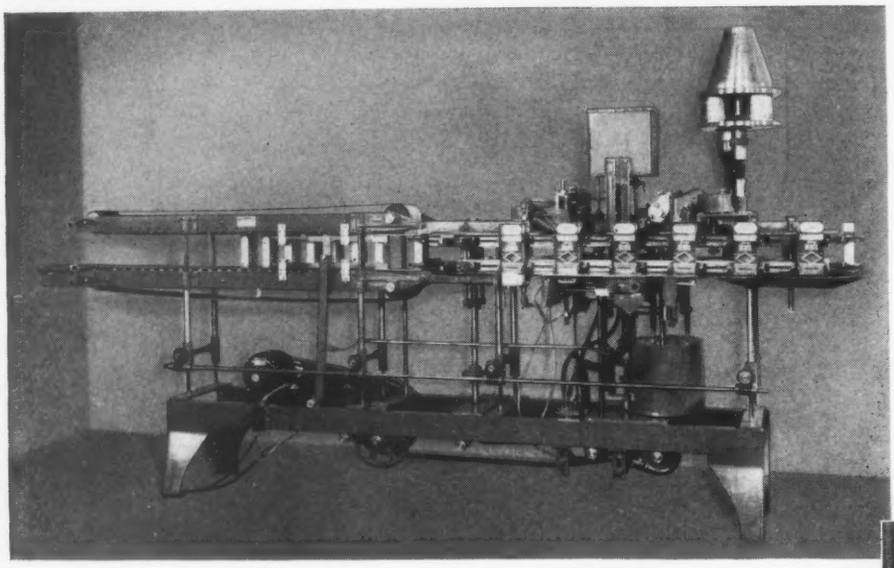
SHARP

SOLVE YOUR PACKAGING PROBLEMS
WITH A SALES BUILDING PACKAGE DE-
SIGNED BY THE R. T. G. CREATIVE DIVISION.
WRITE FOR ILLUSTRATED BOOKLET, "DESIGN FOR SALES".

GLOBE CORPORATION

CINCINNATI 32, OHIO

CARTON FILLING to SHIPPING CASE SEALING



Above: Illustrated is PACKOMATIC's "PT" (pocket type) carton filling unit—one of three types of carton filling units available from PACKOMATIC to meet practically every carton filling need, at speeds of 40 to 80 per minute.

Washburn-Wilson Use Wide Variety of PACKOMATIC Equipment

Right: PACKOMATIC Model D Shipping Case Gluer and Sealer for handling paper shipping containers—at speeds up to 3,000 per hour.

PACKOMATIC HELPS SPEED PACKAGED PEAS TO MARKET

When Washburn-Wilson Seed Co., Moscow, Idaho, decided to help boost the then lowly dry soup pea to prominent shelf room in America's food stores, PACKOMATIC was called in to help with Washburn-Wilson's packaging project.

Today, in Washburn-Wilson's plants in Moscow and at Ralston, Nebraska, PACKOMATIC carton sealers, volumetric fillers and PACKOMATIC Model D shipping case sealers, are helping speed Washburn-Wilson's appetizingly packaged products to market.

Illustrated above is a PACKOMATIC "PT" carton filling, gluing and sealing machine requiring only one operator to square and place carton in finger pocket. Carton then automatically actuates a trip, starting the pocket chains which move forward, following which—automatically—bottom flaps are glued and closed, cartons are filled, and top flaps are glued and closed. After top flaps are closed, the filled cartons are automatically discharged into the compression unit from which finished packages emerge, tightly sealed, at a rate of 25 to 30 cartons per minute. After Washburn-Wilson's products are cartoned by PACKOMATIC efficiently and economically, they are then placed in corrugated shipping cases which are squared, glued and sealed ready for storage or shipment on a PACKOMATIC Model D shipping case sealer.

On the shelves of your favorite food store are many packages of powders, chips, cereals and other food products to the consumer acceptance of which PACKOMATIC has in some measure contributed. Out of PACKOMATIC's experience, there may be a suggestion for you as to how you may more effectively and more economically speed your products to market via PACKOMATIC equipment.

Consult your Classified Directory and find the PACKOMATIC office nearest you—or write Joliet. Your inquiry incurs no obligation. J. L. Ferguson Company, Joliet, Ill.

PACKOMATIC

PACKAGING MACHINERY

J.L. FERGUSON CO. JOLIET, ILL.

Chicago • New York • Boston • Philadelphia
Baltimore • Cleveland • Denver • New Orleans
San Francisco • Los Angeles • Seattle • Portland
Tampa • Dallas

Beauty is

... as Beauty does

Or, in this case, beauty is what CAMEO does — to your package.

There is no more beautiful packaging aid than an embossed, color-printed label, seal, tag or wrap.

And there is no more beautiful label, seal, tag or wrap than one made by CAMEO.

CAMEO creations identify leading products in many fields where beauty is a must: cosmetics, apparel, tobacco and smokers' accessories, sporting goods, food and drugs.

Embossing is the sign of quality. CAMEO is known as the producer of the finest three-dimensional designs and reproduction in multi-color. In fact, the beauty of CAMEO craftsmanship is a by-word in packaging.

Send for samples.

CAMEO
DIE AND LABEL COMPANY
DESIGNERS and CRAFTSMEN
154 WEST 14th STREET
NEW YORK 11, N. Y.
WATKINS 9-8484

IN CANADA: CAMEO CRAFTS INC. • 157 ST. PAUL ST. WEST, MONTREAL

Good Packaging Begins with Good Sealing . . .

NO bottled product can go far on the road to brand leadership without good, reliable sealing. The success of the package—and the product—depends on the reliability of the cork seal.

Out of the scores of grades of cork from which bottle closures may be made, Mundet selects those grades that assure safe sealing. Since requirements differ according to the nature and use of the product, Mundet Cork Closures include many types and styles. Made from prime "pedigreed" cork, chosen from the world's best growing areas, Mundet Cork Closures are remarkably durable. Highly resilient, their efficient sealing action can be depended upon to protect the product during extended use. Write for information on types of corks best suited for your products. Mundet Cork Corporation, Closure Division, 65 S. 11th St., Brooklyn 11.

THERE'S A MUNDET OFFICE OR REPRESENTATIVE NEAR YOU

ATLANTA
BROOKLYN 11
CHICAGO 16
CINCINNATI 2
DALLAS 1
DENVER
DETROIT 21
HOUSTON 1
JACKSONVILLE 7, FLA.
KANSAS CITY 7, MO.
LOS ANGELES
LOUISVILLE 22
NEW ORLEANS 16
PHILADELPHIA 39
ST. LOUIS 4
SAN FRANCISCO

IN CANADA:
Mundet Cork & Insulation, Ltd., Toronto

FOR DEPENDABLE SEALING, USE

MUNDET CORK CLOSURES

Get Paced Production

CONSOLIDATED KOTTONERS

● The new Consolidated Kottoners, K-2, K-3 and K-4, follow closely the basic design of the CaPeM line of automatic cappers and offer you a single design in automatic bottle wadding equipment yet one which meets the broadest possible range of requirements. Their rated capacities range from 40 to 60, 60 to 80 and 80 to 100 containers per minute, and in coordination with the capper, they make available new standards of efficiency on tablet and capsule packaging lines.

The sterility of the wadding material is protected at all times. The wadding is easily removed from the container by the ultimate consumer. Changeover from one size container to another can be made in about 15 minutes.

Write for complete information.

CONSOLIDATED PACKAGING MACHINERY CORP.

1400 WEST AVENUE, BUFFALO 13, NEW YORK

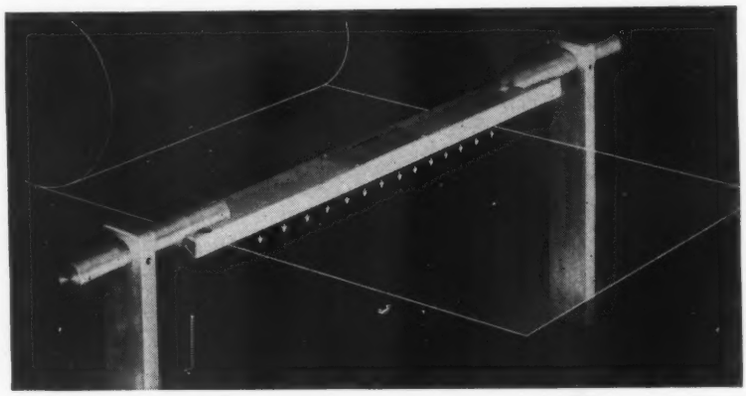
NOW... putting an end to static troubles...

. . . on these machines

wrapping
bag-making
envelope
winding—cutting—folding
coating
printing

. . . handling these materials

cellophane
glassine
cellulose acetate
tissue
wraps
paper stocks



The Ionotron employs a *new method* of eliminating static electricity—a unique method with exclusive, basic advantages. Continuous alpha radiation is provided by a radioactive source in a metallic bar of suitable shape and size for the specific equipment. The rays ionize the air in the critical zone. The ionized air "bleeds off" static charges before they can cause trouble. The Ionotron is continuously and permanently effective. No power connection is required, and there's no operating expense!

Interrupted production due to difficulties in handling static-charged stock . . . irregularities in finished products . . . fire and explosion hazards — all these are common problems in packaging operations where friction generates static electricity. But they need no longer eat into *your* profits, because the Ionotron Static Eliminator* — a new achievement of the U. S. Radium Corporation — has succeeded in eliminating many such static difficulties.

Whether you are a manufacturer or a user of packaging machinery, find out how the Ionotron can put an end to your static troubles. Send a description of your problem to *Dept. F7, U. S. Radium Corporation, 535 Pearl Street, New York 7, N. Y.*

*Trade-mark reg. applied for

U·S RADIUM

IONOTRON
Static
ELIMINATOR

BERKELEY, CALIFORNIA

. . . TO MATCH NEW HORIZONS

We grow... as you grow! Users of processed films and foils are finding new horizons and new markets because these versatile packaging materials match perfectly the needs of self-service merchandising, impulse buying and safe, attractive protection for new and widely varied products.

To meet these expanding demands, Dobeckmun announces the opening of a modern, new West Coast plant at Berkeley, California and an even more substantial expansion at our Cleveland plant.

Whether your product requirements call for cellophane, other films, foils or coated papers; alone or in effective laminated combinations, Dobeckmun is better equipped than ever to provide you the best in packaging . . . engineered to your specific needs.

The Dobeckmun Company, Cleveland 1, Ohio.

FOR THE LATEST DEVELOPMENTS IN SPARKLING PROTECTION WITH CONVERTED CELLOPHANE, PLIOFILM, ACETATES, ALUMINUM FOIL AND COATED PAPERS . . . ASK US FOR SAMPLES AND SUGGESTIONS.

DOBECKMUN

Self-selling packages in processed films and foils

West Coast Division, Berkeley 2, California. Branches in Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

Manhattan... *all readied for Philadelphia!*

We'll be on hand to welcome you at Booth 409 . . . to offer suggestions and help you to solve your 1947 adhesive problems!

We'll welcome you, too, at our meeting room headquarters in Manhattan's suite at the Bellevue Stratford

The Dates as You Know are—April 8th-11th!

MANHATTAN PASTE & GLUE CO., INC.

Lion Brand Adhesives

Chicago
Philadelphia
Rochester
Boston
Cleveland

425 GREENPOINT AVENUE, BROOKLYN, N. Y.

INDUSTRIAL TAPE CORPORATION

New Brunswick, N. J.

"TEXCEL" REG. U. S. PAT. OFF.

——————high speed Production

Well in Hand!

GAIRanteed folding cartons are endowed with a recognized two-fold LEADERSHIP . . .

LEADERSHIP for outstanding performance on high speed production lines.

LEADERSHIP for winning commanding attention of buyers in highly competitive retail markets.

Precision and design problems entrusted to GAIR are always "WELL IN HAND".

Write for informative booklet on PRECISION PACKAGING

GAIR

ROBERT GAIR COMPANY, INC., NEW YORK, TORONTO • PAPERBOARD, FOLDING CARTONS, SHIPPING CONTAINERS

COLGATE DENTAL CREAM IN WIRZ TUBES

Teen Agers are a knowing lot. Seventy-six percent of them prefer tooth paste and 45 percent prefer Colgate's, more than double the next two brands. Congratulations to this national favorite and WIRZ customer of long standing. The figures come from the recent study made by Market Research Company of America of 3,000 readers of HIT PARADER — song-lyric magazine of over a million copies a month. More often than not you'll find the Nation's favorites in WIRZ Tubes. Their convenience, protection and added appeal make them ideal containers. We suggest you put WIRZ Collapsible Metal Tubes in your packaging plans.

ESTABLISHED 1836
A. H. WIRZ Inc.
Fourth & Cole Sts. • CHESTER, PA.
Export Division—751 Drexel Bldg., Philadelphia 6, Pennsylvania

New York 17, N. Y. 50 E. 42nd St. | Chicago 4, Ill. 80 E. Jackson Blvd. | Memphis 2, Tenn. Wurzburg Bros. | Havana Cuba Roberto Ortiz Planos | Los Angeles 14, Calif. 1709 W. 8th St. A. G. Spilker Exposition 0178 — Also Danville, Calif.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression Molding

Announcing

a new, all-purpose automatic filling machine

the *Helene Curtis* 18-valve rotary filler

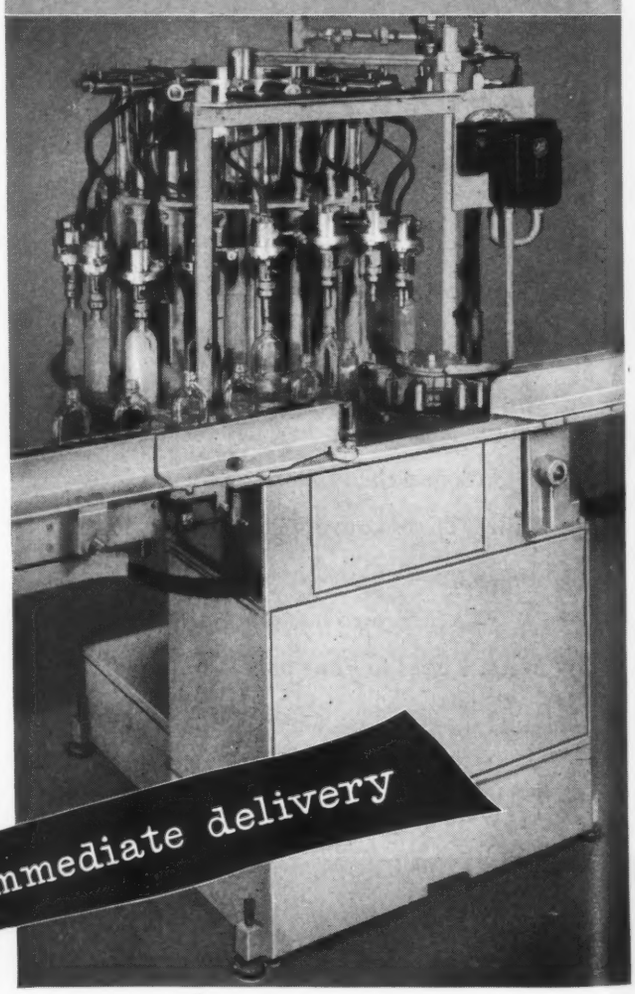
The new high standard of efficiency achieved in this rotary filler is the result of Helene Curtis' 20 years' experience in developing special filling machinery for the hundreds of items packaged by the company. Its economy and dependability have already been proved on Helene Curtis production lines.

Now, any manufacturer . . . large or small . . . can operate automatic filling lines easily and economically . . . speed output and cut operating costs on short runs. For this unit's amazingly fast changeover without tools saves time . . . keeps production lines busy more hours per day.

The Helene Curtis rotary filler handles any size and shape of bottle from 1-ounce to 1-pint at high speed . . . fills free-flowing or viscous liquids by gravity or vacuum feed . . . eliminates container breakage and material loss. Available immediately . . . write for information.

Some Important Advantages of the Helene Curtis Automatic Rotary Filler

- GRAVITY OR VACUUM FEED • VARIABLE RATE OF FILL
- QUICK CHANGEOVER WITHOUT TOOLS • SIMPLIFIED DESIGN
- FLEXIBLE FILLING RANGE • AUTOMATIC DOUBLE BOTTLE CHECKS
- STAINLESS STEEL-RUBBER CONSTRUCTION • EASY-TO-CLEAN



immediate delivery

also available

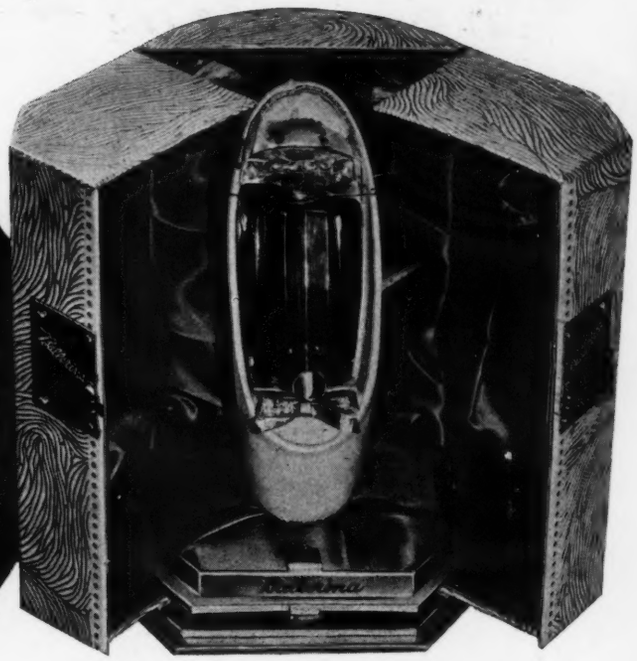
CARTONING MACHINES • HIGH-SPEED LABELERS

special machinery division

Helene Curtis Industries, inc.

505 N. SACRAMENTO BLVD., CHICAGO 12, ILL.

out of your dreams



Glorifying your product—enhancing its appeal, is simply doing what comes naturally to Feder Industries. Decorative Packaging calls for specialized thinking—for unique ideas and for the kind of detailed craftsmanship at which Feder is tops.

The same skill and imagination that turn out masterpieces of packaging beauty for big names in the cosmetic industry are at your service.

Complete presentations. Your caterers for boxes of every description, sachets, puffs, kits, bows, displays and all the unusual luxurious decorations that make your package stand out—a package that is strikingly different—that SELLS—that is admired and remembered.

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How "HYPOWER PEDRO" ... combined to create new ... Sa...

HYPOWER is an old and respected trade name in the canned meat business. But the far sighted manufacturer—The Rutherford Food Corporation—realized that the HYPOWER package needed revitalizing to gird itself with greater sales appeal for the competitive times ahead. U.S.P.&L. was commissioned to do the job. The resulting new label designs are shown here. The enthusiastic response of the Rutherford organization and of the trade to the newly designed packages is best expressed in the words of Mr. George Van Voorst, Rutherford Vice Pres. and Gen. Mgr.

"The entire Rutherford organization is highly pleased with the new HYPOWER labels, created and produced by the United States Printing and Lithograph Company. In addition to reflecting the high quality of our products, these labels do a thorough merchandising job for them on the package. Although the new labels have been in use only a short time, the response on the part of the trade has been extremely gratifying to say the least."

On the designing boards in the U.S.P.&L. Creative Department, the revitalized trade character HYPOWER PEDRO was conceived and developed. A plaster of Paris model was made and photographed in natural color.

A PACKAGING CASE HISTORY FROM THE FILES OF U. S. P. & L.

...and full color food pictorials Sales Power for HYPOWER packages

The Old ... the familiar HYPOWER label (shown immediate right) has long identified the quality products of the Rutherford Food Corporation—Chili Con Carne Without Beans, Chili Con Carne With Beans and Tamales With Gravy (label shown). But modern merchandising trends dictated an improvement in design that would provide greater point-of-purchase sales power to the package. After careful analysis of the special merchandising problems involved, U.S.P.&L. designers made their recommendations.

The New ... to secure greater animation and trade mark identity for the Mexican caricature "HYPOWER PEDRO", a plaster of Paris model was built, photographed in full color and incorporated into the display panel design. New direct color food pictorials likewise were made for the display panel. To add further appetite appeal and merchandising value, a series of nine full color photographs of new and interesting ways of serving the products were reproduced on the consumer panel of the label with printed recipes for preparation appearing on the reverse side of the label. Result—stronger brand name and trade mark identity, greater appetite appeal, new sales power. (See label immediate right.)

INGREDIENTS:
Tamales made of Beef Broth, Beef, Corn Meal, Pork, Wheat Farina, Spices, Salt, Wheat Flour, Garlic, Baking Powder.
Gravy made of Water, Corn Starch, Spices, Salt.
NET WEIGHT 15½ OZS.
Rutherford's
HYPOWER
HYPOWER BRAND
TAMALES WITH GRAVY
PACKED BY RUTHERFORD FOOD CORPORATION KANSAS CITY, MO., U. S. A.

Above are full color reproductions of three new HYPOWER labels, front and back. Note the improvement in attention value of the front or display panels brought about by the new full color food pictorials and the revitalized trade mark "HYPOWER PEDRO". The back or consumer panel of each label is designed to do a thorough merchandising job for the product, both at point of sale and point of use, by showing the housewife how to prepare and serve the product in an interesting and attractive manner. Yes, HYPOWER labels, like other "U-S" created labels, are designed for greater sales power. If your package should need more of this sales power, consult "U-S".

THE UNITED STATES PRINTING & LITHOGRAPH COMPANY
EXECUTIVE OFFICES: 751 BEECH ST., CINCINNATI, 12, O. ★ SALES OFFICES IN PRINCIPAL CITIES
5 Great "U-S" Plants ... Producing Highest Quality Packaging and Advertising Materials

SUCCESS STORIES OF AMERICAN BUSINESS

SPAULDING BAKERIES, INC.

SIX LOAVES PER DAY

SIX loaves per day was the capacity of Mrs. Renna Z. Spaulding's kitchen oven in February, 1896, when the first Spaulding Bread was baked. Illness had kept Mr. Spaulding from his steady job, but the Spauldings hoped to fight it through by working together. Their bread was good. Business expanded rapidly to a 24-loaf oven...then a 108-loaf oven...then a large oven designed by Mr. Spaulding

Today, Spaulding Bakeries have seven modern plants, 850 employees, and 200 trucks. Spaulding "firsts" are numerous...first with "dated" cakes...first in their section with Vitamin D bread...first with Super-Enriched bread.

When the Spauldings first started, 95% of all bread was baked in the home. Now 95% is made in bakeries...a vast industry built within our lifetime by typical American energy and vision.

HOW SPAULDING BAKERIES USE RIEGEL PAPER

For ten years Riegel's Diafane has been on the firing line throughout most of New York, New Jersey, Delaware and part of Pennsylvania—wherever the Spaulding trucks roll. Diafane Bread Wrap meets every requirement of modern bread merchandising in appearance, in protection and *in cost.*

Riegel Papers

FOR FUNCTIONAL PACKAGING

391

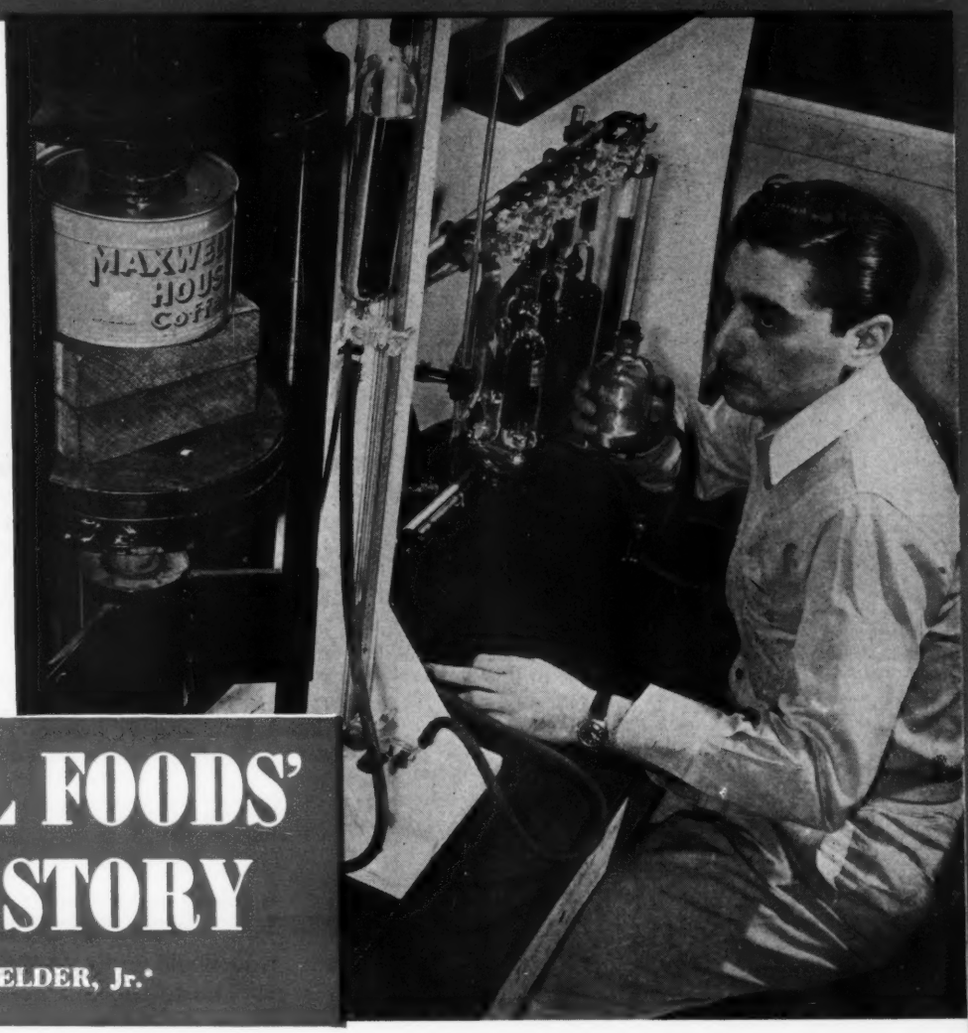
RIEGEL PAPER CORPORATION • 342 MADISON AVE. • NEW YORK 17, N. Y.

Modern PACKAGING

VOLUME 20

NUMBER 7

MARCH 1947



Gas analysis apparatus used to determine effectiveness of vacuum seal of Maxwell House coffee containers. Sealed packages are tested after storage intervals to estimate rate of air leakage. This procedure was most valuable during the war when a variety of glass containers and closures had to be used to supply requirements. The method used is based on the "Burrell Manual for Gas Analysts."

GENERAL FOODS' INSIDE STORY

by LUCIUS W. ELDER, Jr.*

The package research expert for a corporation long recognized as a pacemaker in package development outlines operations and objectives, as he sees them, of a modern package-testing laboratory

Someone has called packaging "suspended animation." In a way this expression describes very well our packaging purpose at General Foods. This purpose is to take a product from our production lines, put it into a package and keep it there as fresh and palatable as when it left the lines until it is opened and used by the consumer.

The General Foods Corp. has always been very quality conscious and it is our management's ever-watchful attention to ways of bringing fresher products to the consumer that has led to intensive package research and our pioneering in the establishment of procedures for testing packaging characteristics and methods of evaluating package performance.

Package research was instituted as a separate unit at General Foods in the fall of 1934 when Charles A. Southwick, Jr., now technical editor of MODERN PACKAGING, was appointed to start a laboratory that could assist purchasing and manufacturing departments in obtaining packages that would give better performance.

That was in the dark days of the depression when

* Director of Materials and Products Evaluation Laboratory, General Foods Corp.

The author is shown examining packages in the General Foods' water-vapor test cabinet. This equipment and procedure for using it, developed by the laboratory, has become known as the General Foods method and is now standard practice in many industries.

DR. ELDER, an outstanding figure in the field of packaging research, has been with General Foods research since 1932. He is at present Director of the Materials and [illegible] with the Ammonia Division of DuPont as superintendent of the process laboratory. As associate professor of chemistry at the University of Illinois, 1927 to 1930, he taught analytical chemistry and was engaged in special research on instrumental methods of analysis, especially the glass electrode for pH measurement. He was born in Wayne, Pa., was graduated from Haverford College, received his Ph.D. degree from Harvard and furthered his studies at Cambridge in England. He's a Phi Beta Kappa and a member of several honorary societies in the technical field, including the American Chemical Society.

every company was fighting for business. There was lots of corner-cutting to lower prices and many claims were being made for packaging materials that could not be substantiated. If the truth were told, according to some sources, literally carloads of packaged products were being lost by industry generally at that time because of spoilage due to package materials that did not meet performance requirements. And the worst of it was that manufacturers had practically no facilities or methods for evaluating the packages and materials before purchasing and no knowledge as to how such supplies would act in high-speed production.

General Foods became aware of this situation through increasing returns of packaged products from grocery stores—packages of cocoa, for instance, where grease had seeped through the containers and made the packages unsightly, or products that caked because of too much moisture entering the package. Since the trouble was obviously the packaging, manufacturing divisions called the purchasing department to task for inadequate materials, but neither manufacturing nor purchasing had a remedy for the situation because neither had any methods of determining what types of packaging would really do the job.

The answer was the establishment of a small department devoted exclusively to package research, reporting to the vice president in charge of research. When this two-man department began activity—Mr. Southwick in the New York office and Thomas Rhodes in laboratory space set aside in the Eastern development laboratory at Franklin Baker Division in Hoboken, N. J. —it sailed uncharted seas. At that time there were no specifications or methods for testing package characteristics and, so far as is known, nobody was doing any similar work.

Their first undertaking was to collect data on packaging from all departments—sales, advertising, consumer service, manufacturing, purchasing, food technologists—to determine what types of packages were required and then develop testing equipment to find materials that would meet specifications for particular packaging jobs. Out of this work, done cooperatively

with suppliers and technical groups, have been developed test procedures for materials and finished packages that are now standard practice in many industries. There is, for example, what has become universally known as the General Foods method of testing water-vapor transmission. Some of the Standard Test Methods (See Technical Section, p. 193) now being established by the Packaging Institute are actually the result of early effort for better packages at General Foods.

Today our packaging research section is located at the central laboratories of General Foods Corp. in Hoboken, with a staff of six persons engaged full time in package research. Although it is difficult to measure in actual dollars and cents the value of this service to a company as large as General Foods, the figure probably reaches millions in actual savings, exclusive of the consumer good will gained through packages that assure quality products.

The function of package research may be most tangibly explained by a few specific examples of achievements. Take, for instance, a paper used for machine wrapping of chocolate. The company was once using a sheet costing 12 cents a pound that was absolutely unsuitable for machine handling and did not give good protection to the product. Laboratory findings revealed a paper at nine cents a pound with better protection and satisfactory machine handling properties. In another case the laboratory discovered by careful performance tests a fibre-bodied canister for cocoa that gave as good protection as a former container at a saving of $5.20 per thousand. Where millions of packages are produced annually it is easy to comprehend the value of such package research.

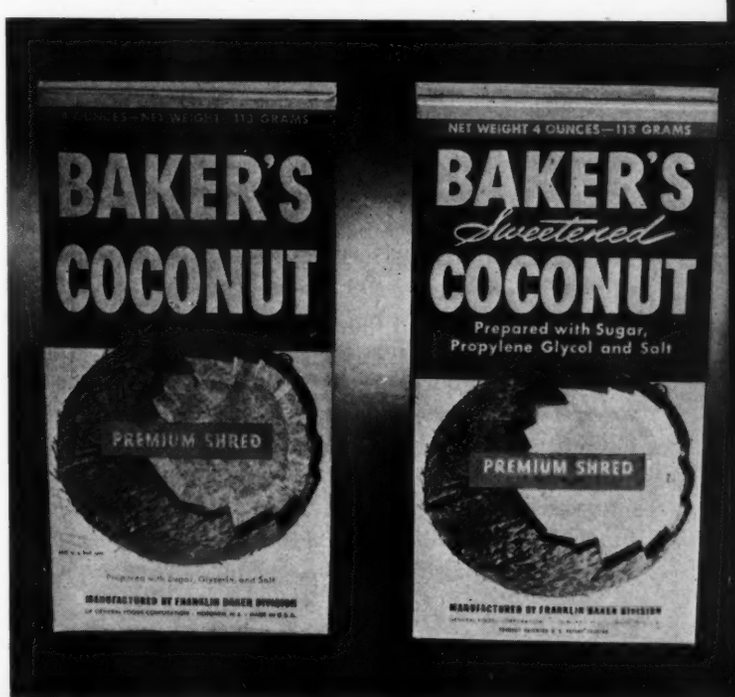
Today a package that is accepted for mass production by General Foods must have passed all the test procedure established by the laboratory to meet requirements set by the nature of the product. Before it actually goes into production, the accepted package must have been approved by the production department, which is assured of its efficiency by actual trial runs on the company's production lines. It must have been approved by the consumer service department which makes actual kitchen tests of the products that have been stored in laboratory sample packages under every situation approximating actual market and climatic conditions. It must be approved by the purchasing department, which okays the bills, and by sales and advertising personnel, who must be satisfied with surface display and consumer convenience features.

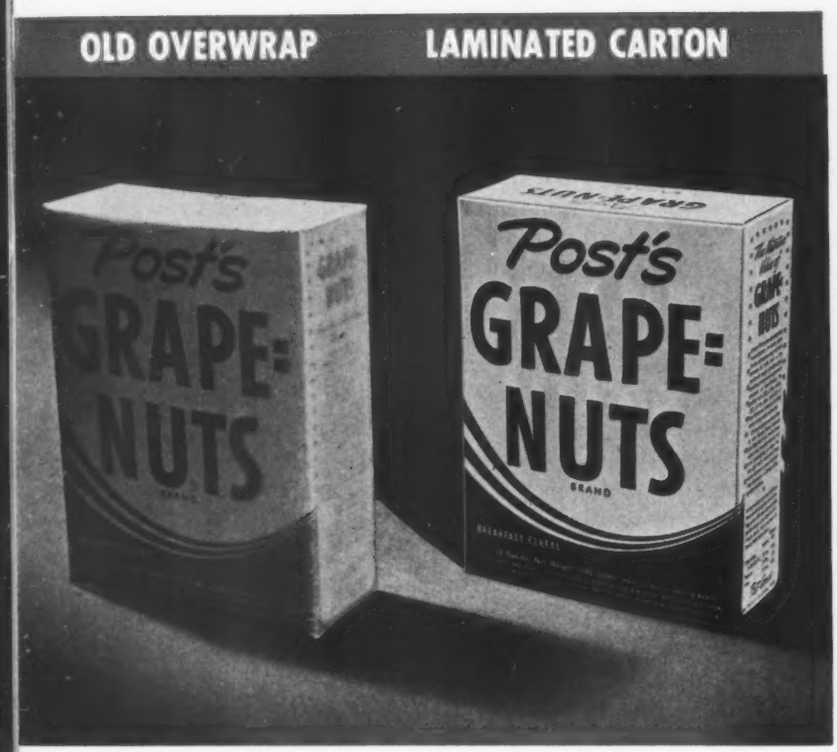
The broad objectives of a packaging research section in our organization have thus grown into the many ramifications of the following three problems:

1. *Reduction of product spoilage between our packaging lines and the consumer's table.* Spoilage can be caused by excessive moisture absorption, by pick-up of foreign odors or loss of volatile flavor components or, in the case of oxygen sensitive materials such as coffee, by leakage of air into the package. Other packaging defects which affect consumer acceptance are those which allow excessive seepage of oil from high fat food products and packaging conditions which allow insect infestation. Among the products which suffer by moisture absorption are breakfast cereals, gelatin dessert mixtures and beverage powders, such as soluble coffee and Instant Postum. Conversely, shredded coconut is most appetizing when an optimum amount of moisture is retained in the package. Shredded coconut also provides an excellent example of a material requiring a high degree of greaseproofness in its packaging. Some of the problems involved in preparing vapor-tight packages appear to be paradoxical. For example, breakfast cereals require a high degree of protection against absorption of water-vapor, yet the product is most appetizing when it is allowed to "breathe." Protection against insect infestation is an ever-present problem for which no foolproof package has yet been developed, aside from the hermetically closed glass jar or tin can. Aside from the obvious methods of good housekeeping in warehousing and retail outlets, the best practical control appears to be in providing as nearly perfect seals as possible on carton flaps, or the use of overwraps wherever possible.

2. *Reduction in cost.* This may be frequently achieved in one of two ways. A new choice of mate-

Shredded coconut requires a high degree of greaseproofness in its packaging. These old and new Baker's coconut packages were stored at 100 deg. F. and 20–25% relative humidity. Old packages showed serious staining in two to seven days. New packages of similar but more protective materials showed very little staining after two-and-a-half months. Such package improvements are essential in bringing fresher and more appetizing-looking products to consumers.





The laboratory must be able to temper its recommendations in the light of practical factory packaging conditions. From a merchandising standpoint, it was decided that Grape-Nuts package would have more shelf display and eye-appeal without its overwrap of waxed glassine.

Under wartime conditions, it was not possible to provide machinery for lining the carton. After study, the laboratory recommended a glassine laminated board which had adequate protective value and which could be handled on existing packaging equipment in the company's plant.

rials or development of new materials sometimes allows a cost reduction without sacrifice of package performance in those cases where the protection now afforded is adequate but not excessive. A second area in which cost reductions can be found is that in which the present package is affording more protection than is necessary. Probably one of the most fruitful fields of research directed toward this objective is in the vacuum packaging of coffee. Some success has been achieved on an experimental scale in the use of metal foil laminated to paper or other cellulosic film as a substitute for the tin can and glass jar.

From another standpoint, economies are often effected by utilizing new developments in packaging machinery.

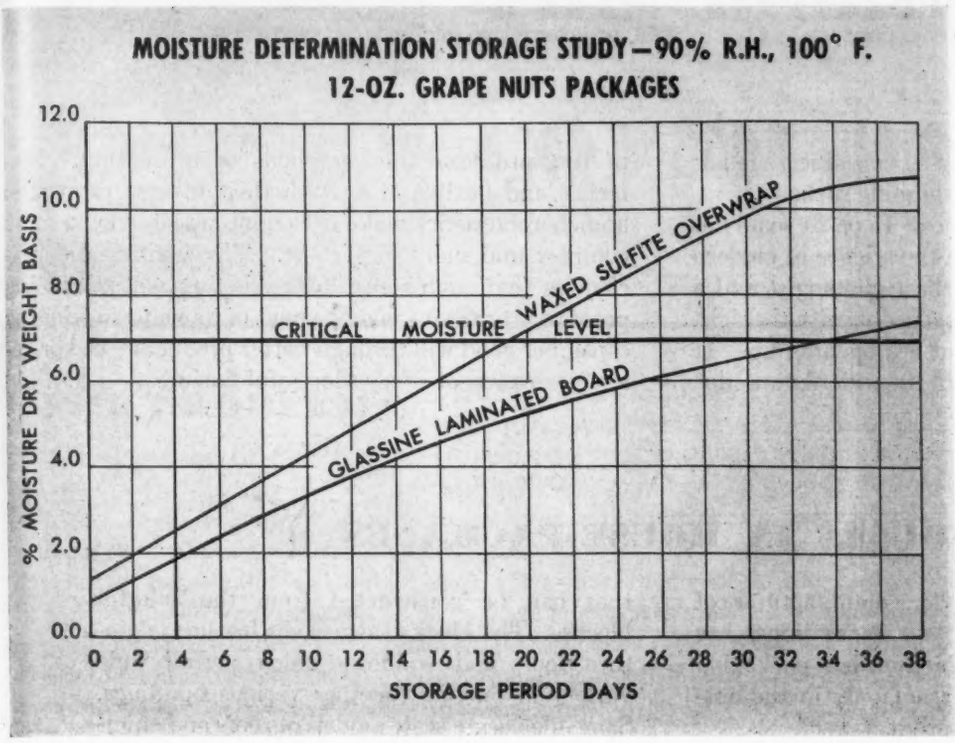
3. *The development or recommendation of effective packages for new products.* Usually the package specified for a new product is designed to give a large margin of protection in order not to compromise initial acceptance. It is in this area that later research aimed at reduction of cost is frequently profitable.

The actual laboratory operations involved in working toward the foregoing objectives can be described as follows:

The packaging requirements are set largely by the nature of the product itself; therefore, one of the first functions of the laboratory is to find out all that can be learned regarding factors influencing consumer acceptance of the product. Returning to the case of moisture absorption as a damaging factor, the laboratory is set up to study systematically the extent of moisture absorption at any given relative humidity. In collaboration with food technologists and other groups in central laboratories, it is usually possible to agree on the limits within which moisture content may be allowed to vary without affecting the salability of the product.

Sometimes a simple observation of physical change, such as caking of beverage powders, suffices to set a permissible moisture content. Other cases are more complex, such as the effects of moisture on texture and color of shredded coconut or the complex chain of events leading to caking and loss of leavening strength in baking powder. Whenever a so-called index of failure can be set for a given product, a knowledge of the corresponding critical humidity will suggest the kind of package which must be specified. Laboratory operations concerned with this variable then include a study of the relation between moisture content and humidity for the specific product and the compilation of data regarding the water-vapor permeability of packaging materials to be considered. Standard test procedures have been worked out for both of these operations.

If water-vapor or other damaging factors had access to the contents of the package only through the packaging materials itself, the laboratory job would be finished with the completion of the operations just de-



Graph shows comparative performance of waxed overwrap and the glassine laminated board during storage, proving effectiveness of the latter. As a result of this study, the package with greater shelf appeal was adopted.

scribed. Unfortunately, no package can be fabricated without introducing discontinuities in the formation of seams and closures. The laboratory, therefore, has to make a study of such operations as heat-sealing liners and bag openings, gluing carton flaps, seaming of can ends and gasket materials for glass jar closures, to mention only the most important. This factor of seams and closures is best studied in two steps: first, by carrying out the operations in the laboratory where the materials normally employed are used to make as nearly perfect seams and closures as possible; secondly, by testing finished packages for resistance to water-vapor by storage in controlled warm, humid atmospheres in laboratory cabinets where water-vapor is the variable under investigation, or by merely holding for specified time intervals where air permeation is under study, or under controlled temperature and pressure conditions where grease or oil permeability is involved.

When such tests have established the proper choice of materials to be used in seaming and closing the packages, it is time to carry out similar tests on packages made in regular production on commercial packaging machinery. It is only by knowing the ultimate protection possible from laboratory fabricated packages that defects in machine operations can be clearly located.

The packaging laboratory must be sufficiently well acquainted with the operations of both existing and proposed packaging equipment to temper its recommendations in the light of practical factory packaging conditions. As an example, it was recently decided that, from a merchandising point of view, a certain breakfast cereal which had been protected by a waxed glassine overwrap would have more shelf display value if the overwrap were eliminated. Under existing wartime conditions it was not possible to provide machinery for lining this carton. The laboratory finally recommended the use of a glassine laminated board which had adequate protective value and could be handled on existing packaging equipment.

An important function of the packaging research laboratory is to keep its observations based on accelerated laboratory tests in correlation with actual warehousing experience in the field. Wherever practical, a limited number of alternative packages are put in storage in localities representative of wide variety of climatic conditions for sampling and laboratory observation at intervals over a period of at least a year, in most cases.

Although the packaging research laboratory is primarily concerned with functional quality of packaging materials that are used to get the product to the consumer with factory-fresh quality at minimum packaging expense, it must also be concerned with factors affecting display value and convenience to the consumer. For example, the choice of inks, press-varnishes or lacquers for improving shelf display cannot be considered apart from effects of press room operations on the functional qualities of the packaging material. Another case in point is the recent introduction of a new closure for vacuum packing glass coffee jars which is functionally superior to the old-style screw cap, but sufficiently unfamiliar to the consuming public so that its adoption required a thorough re-evaluation of consumer acceptance.

Finally, the packaging research laboratory has to be concerned with factors affecting the mechanical strength of containers under shipping conditions, which have to

do primarily with the outer shipping container, such as corrugated cartons or multiwall shipping sacks.

Packaging research in the space of 15 or 20 years has taken a new and definite place in the science of modern industry. It is a new field for the technologist and a branch in which today there are few people with the right technical skills to fill the jobs that are opening up. It is a field that is growing along with the wider knowledge of test procedure and methods of evaluation. Materials and flexible films with their diverse properties and characteristics make packaging research even more complex and more important. The savings and efficiencies that such research is effecting are convincing proof to progressive management of its value in winning consumer good will through better products—the priceless possession of every successful business.

HOUSES IN HOUSE-PACKAGES

The A. C. Gilbert Co., manufacturer of children's toys for two generations, has announced a new line which utilizes packaging materials and techniques not only in the outside container but in the product itself.

The latest thing in building blocks for children utilizes clay-coated cartons and carton board. Warm shades of color, ranging from raspberry red to turquoise blue, are an integral part of the clay-coated surface of the blocks themselves and the outer container. As many as 26 different kinds of model houses may be built with the smallest set of 12 pieces.

For display purposes, the outside container of each set is designed for instant eye appeal. It is a large replica of one of the many houses that can be constructed from the colorful blocks. The blocks themselves feature miniature doors and windows which permit wide variety in putting together various buildings. Some blocks are scale models of roofs and chimneys. An introductory offering in New York stores has proved it to be a fast-moving item.

Multiples of regular architectural cubes, the blocks fit into their representative containers with perfect continuity of shape and design. A simplified blueprint of possible combinations of the blocks is furnished with each set.

CREDITS: *Containers and blocks by American Coating Mills, Inc., Elkhart, Ind. Blocks designed by Anne Farrell.*

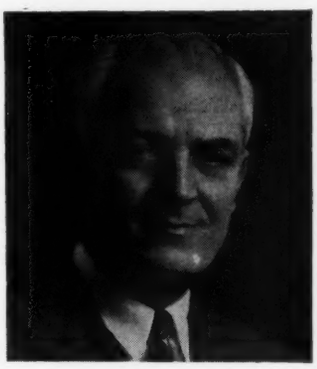
"Buildings" and containers (large buildings, right and left) are clay-coated carton board.

This month's COVER PACKAGE*

THE PROBLEM: To plan a fast-selling package for a new soapless cleaner with the suggested name of "Clean-Aid." The carton must create a desire for the advantages of completely new chemistry in soapless detergents. Copy and illustration must break down an idea that the soap industry has spent millions to build up—namely, that quick and abundant suds are a requisite to good cleaning—yet show that the new cleaner will create mild suds if prepared correctly. The package must persuade women to spend more money for visually less product, since a box of this new concentrate makes a smaller package than conventional soap powders. The package must also show that this new detergent is an all-purpose cleaner for dishwashing, laundry, glass, woodwork; will not injure delicate fabrics and is kind to hands. It must do an over-all promotional job of educating the shopper to an entirely new product on the grocer's shelves in competition with many leading products which women have bought for years through habit.

THE SOLUTION: The designer's first suggestion was to change product name from "Clean-Aid" to "Safe,"—a shorter, quicker-paced word for small-space display and a brand name suggesting safety for all cleaning purposes, since women must be convinced that new chemical concentrates are harmless. The running faucet illustration conveys idea of mild suds when product is placed in a receptacle and hot water added with force. The word "concentrate" added to net weight helps overcome obstacle of the smaller package. Kosher symbol below it opens a large potential market for users of non-animal-fat cleaners. Dish washing, largest daily use, is pictured; other uses are emphasized in orange patch. Four colors—green, orange, light blue, gray—on clay-coated board, varnished, are recommended for quality appeal of higher-priced smaller package. Price patch on top and product name on all sides are planned for dealer and consumer convenience. Back panel contains detailed directions, because this package must change consumer cleaning habits.

THE DESIGNER: Jim Nash was first given national recognition as a package designer when he received the Wolfe Award in 1934. Today Jim Nash packages for hundreds of famous brands may be seen in practically every American home. Born in Cincinnati, he attended Cincinnati Art School, Art Student's League in New York and started his art career in the lithographic business. This led to a post at BBD&O in charge of package design, posters and display; later to one as designer with Reynolds Metals Co. Some 15 years ago he went on his own and now moves in the "big time" with such impressive clients as General Foods, Pillsbury, Quaker Oats, Corn Products, McCormick & Co., Hood Chemical, Sapolin, Carr-Consolidated Biscuit Co., Du Pont, Rath Packing Co., Ken-L Products, Welch's Grape Juice and others—for whom many Nash-designed packages have been top winners of MODERN PACKAGING All-America Package Competition awards.



JIM NASH

* Brand and company names used in this hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration.

PHOTO, HAROLD M. LAMBERT

THE 1947 PACKAGING SHOW

The stage is set for the 16th annual Packaging Conference and Exposition, sponsored by the American Management Assn., which will open in Philadelphia on Tuesday, April 8, for a four-day run. It will be the biggest affair of its kind in the history of packaging.

Close to 200 manufacturers of packaging supplies and equipment will be represented in the Exposition on the main floor of Philadelphia's Convention Hall when the doors are thrown open at 10 A. M., April 8. This compares with 140 exhibitors last year at Atlantic City in what was, up to then, packaging's biggest show. The Exposition will continue through Friday, April 11.

Judging from advance hotel registrations, attendance at the combined Conference and Exposition will exceed last year's record 10,000.

The mammoth floor of the Philadelphia hall was originally laid out with 80,000 sq. ft. of exhibit space, sufficient to accommodate 150 exhibitors. This space was sold almost immediately upon announcement and late last month the management decided to open up an added 15,000 sq. ft., providing 35 more booths. At press time most of these booths had been taken and indications were that the big hall would be a complete sellout. If so, the Exposition will be 32% bigger than last year's—which, in turn, was 50% larger than any of its predecessors.

From information received by MODERN PACKAGING it is apparent also that manufacturers generally are taking larger individual space and arranging more elaborate displays and demonstrations than ever before. Practically all machinery makers will have new machines in operation and in some cases complete packaging lines may be seen in action. Most of the material suppliers, too, will have important new developments to be shown for the first time at this exposition. Feature articles in this issue of MODERN PACKAGING treat at length with these new developments in equipment and materials.

The program for the Conference, which will hold morning and afternoon sessions in the same building on each of the first three days of the Exposition, has been completed. It reflects the views of more than 500 representative packaging firms who were polled by the Program Planning Council to determine just what

TEAR THIS OUT AND TAKE IT WITH YOU

Your MODERN PACKAGING guide to A.M.A. Packaging Exposition, Convention

TEAR THIS OUT AND TAKE IT WITH YOU

ALPHABETICAL LIST OF EXHIBITORS

Company	Booth No.
A-B-C Packaging Machine Corp.	56–57
Aluminum Co. of America	503–5
American Can Co.	52–53
Amsco Packaging Machinery, Inc.	312
Anigraphic Process, Inc.	522
Armstrong Cork Co.	304
Arabol Manufacturing Co.	406
Associated Cooperage Industries of America, Inc.	61
Atlas Powder Co.	65
Automatic Web Guide Co.	49–50
Bag Print Machinery Corp.	64
Baird, C. D. & Co.	42–43
Bakelite Corp.	401
Barrett-Cravens Co.	319
Bemis Bro. Bag Co.	54–55
Bensing Bros. & Deeney	629
Betner, Benj. C. Co.	506
Better Packages, Inc.	306
Bingham Bros. Co.	632
Braun, W. Co.	225
Burt, F. N. Co., Inc.	412
Carter Engineering Co.	514
Celanese Plastics Corp.	201–2
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Central States Paper & Bag Co., Inc.	614–15
Champlain Co., Inc.	210–11
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Clark, Geo. V. Co., Inc.	120
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Consolidated Packaging Machinery Corp.	303
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Cushman & Denison Mfg. Co.	121
Davison Chemical Corp.	608–9
De Luxe Craft Mfg. Co.	15
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Diaphane Bag Corp. of Pa.	627–28
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Dow Chemical Co.	63
Du Pont, E. I., de Nemours & Co., Inc.	220–22
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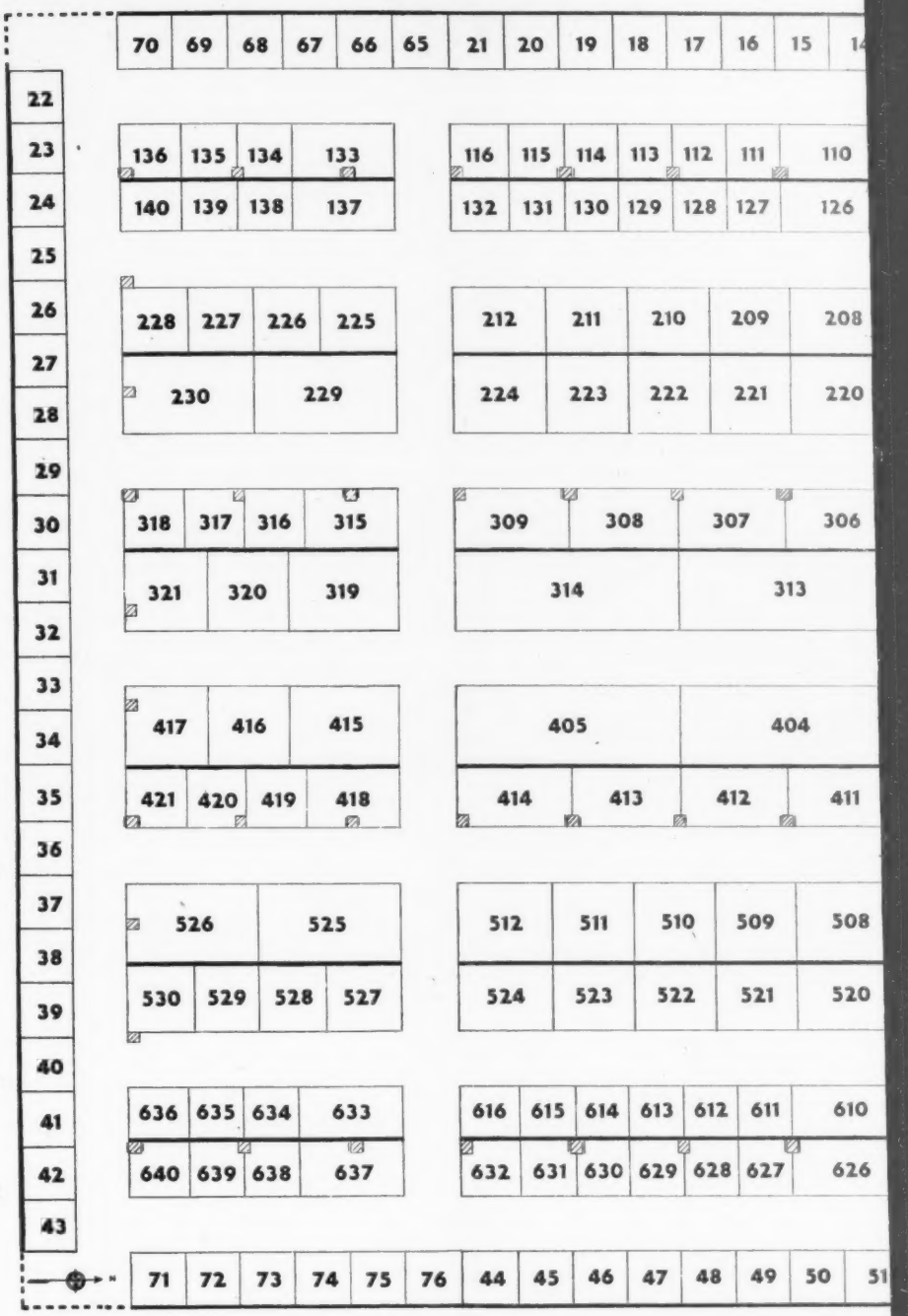
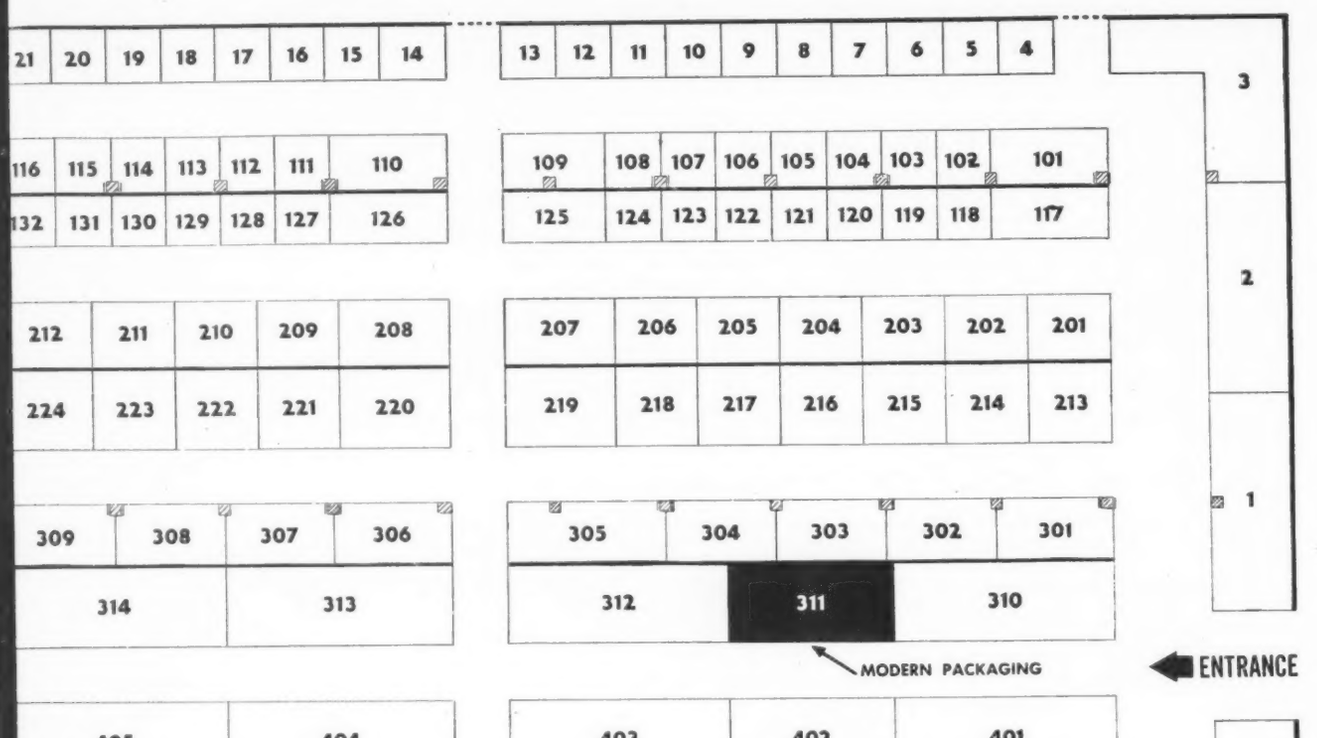
Heat Seal-It Co.	28–29
Heinrich, H. H., Inc.	110
Hinde & Dauch Paper Co.	219
Horix Mfg. Co.	413
Imported Delicacies, Inc.	206
Industrial Tape Corp.	626
International Paper Box Machine Co.	60
International Printing Ink	520
International Staple & Machine Co.	44–46
Ivers-Lee Co.	320
Jones, Jesse, Box Corp.	229
Jones, R. A. & Co., Inc.	516–17
Kalamazoo Vegetable Parchment Co.	302
Karstrom, Paul L. Co.	39 & 41
Kimberly-Clark Corp.	215
Kimble Glass Co.	35
Kono-Mead Equipment Corp.	47–48
Lamson Corp.	101
Lawrence Universal Pallet Corp.	16–17
Lee Converters, Inc.	223
Leeds Sales Co., Inc.	111–12
Link, L. & Co.	604
Lynch Package Machinery Corp.	2
MRM Co.	621–22
Manhattan Paste & Glue Co.	409
Marathon Corp.	3
Marsh Stencil Machine Co.	14
Matthias Paper Corp.	611
Merchants Box Co.	603
Milprint, Inc.	307–8
Minnesota Mining & Mfg. Co.	8–9
Modern Containers Co.	27
MODERN PACKAGING	311
Monsanto Chemical Co.	1
Mosstype Corp.	30
Multistamp Co., Inc.	37
Nashua Gummed & Coated Paper Co.	104–6
National Adhesives	403
National Metal Edge Box Co.	301
National Transparent Plastics Co.	130
National Waterproofing Co.	416–17
National Wooden Box Assn.	103
New Hermes Engravers	636
New Jersey Machine Corp.	518–19
Oliver Machinery Co.	205
Owens-Illinois Glass Co.	117
Package Industries	523
Package Machinery Co.	213–14
Packaging Parade	132
Packaging Service	76
Packing & Shipping	31
Pack-Rite Machines	309
Paisley Products, Inc.	207
Peters Machinery Co.	617
Philadelphia Container Co.	137
Pilliod Cabinet Co.	4
Pneumatic Scale Corp.	224
Potdevin Machine Co.	410
Protective Coatings Corp.	36
Radio Corp. of America	515
Rapids-Standard Co.	525–6
Redington, F. B. Co.	125
Reynolds Metals Co.	404
Riegel Paper Corp.	32–4
Rodgers, George C. Co.	10
Ross, A. H. & Co.	62
Royal, Thomas M. Co.	208
Scandia Mfg. Co.	524
Schoettle, Edwin J. Co.	20–21
Shaw-Randall Co.	127–8
Shellmar Products Corp.	402
Sherman Paper Products Corp.	610
Shipping Management	118



position, Convention Hall, Philadelphia, April 8 to 11, 1947



Company	Booth No.
Radio Corp. of America	515
Rapids-Standard Co.	525–6
Redington, F. B. Co.	125
Reynolds Metals Co.	404
Riegel Paper Corp.	32–4
Rodgers, George C. Co.	10
Ross, A. H. & Co.	62
Royal, Thomas M. Co.	208
Scandia Mfg. Co.	524
Schoettle, Edwin J. Co.	20–21
Shaw-Randall Co.	127–8
Shellmar Products Corp.	402
Sherman Paper Products Corp.	610
Shipping Management	118
Smith, S. K. Co.	119
Shuman Equipment	633–5
Speedry Products, Inc.	70
Standard-Knapp Corp.	5–6
Stanford Engineering Co.	139
Stokes & Smith Co.	601–2
Sun Oil Co.	75
Sylvania Division American Viscose Corp.	501–2
Tompkins Label Service	123
Traver Corp.	415
Triangle Package Machinery Co.	508
Twitchell, E. W., Inc.	122
Union Bag & Paper Corp.	411
Union Special Machine Co.	138
United Paperboard Co., Inc.	109
U. S. Automatic Box Machinery Co.	509–10
Vac-Spray Machine Corp.	321
Ward, D. L., Co.	107–8
Weber, H. G. & Co.	419
Weinman Bros.	7
West Co.	38
Western Products, Inc.	521
Wirebound Box Mfgrs. Assn.	612–13
Wood Conversion Co.	209
Woodcraft Products	129
Wrap-Ade Machine Co.	40

subjects were of greatest current interest. Two clinics —one on Tuesday afternoon devoted to consumer packaging and one on Wednesday afternoon on shipping containers—will take up specific questions elicited by this survey and, in addition, will be open to questions from the floor. Panels of experts on various phases of these two subjects have been assembled to answer the questions.

The complete program, along with a guide to Exposition exhibits, will be found on the special insert facing this page. The insert is perforated for the convenience of those readers who may wish to tear it out and take it with them as a pocket guide. Elevators will take visitors to the Conference sessions in the Ballroom on the third floor of Convention Hall.

Both the Conference program and the Exposition exhibits reflect the fact that this is a pivotal year for packaging. After five years in which the packager had to be content with getting just the best *available* supplies, all attention is now centered on procuring and supplying the best *possible*. The program shows an increasing awareness of sales appeal and cost factors in anticipation of a return to normal competition in the sale of consumer goods. The Exposition exhibits will encompass scores of really important developments in both materials and equipment which manufacturers were unable to unveil until now because of the chaotic supply situation. There is confidence that a return to near-normal conditions this year will at last make all these good things available.

Two other packaging organizations will have meetings coincident with the A. M. A. gathering.

Members of the Packaging Machinery Manufacturers Institute will hold their semi-annual meeting on Monday, April 7, at the Hotel Warwick in Philadelphia. Business sessions during the day will be followed by the semi-annual dinner. The Warwick has been designated as headquarters for the machinery manufacturers.

The Packaging Institute, which originally had scheduled its annual banquet for New York's Waldorf-Astoria Hotel on April 7 also has shifted it to Thursday, April 10, at the Warwick in Philadelphia.

The Philadelphia Convention & Visitors Bureau has made special arrangements to care for a crowd in excess of 10,000. Although latecomers may not have their choice of hotels, the hotel association has promised to take care of all comers in one or another of the 30-odd first-class hotels in the city. Convention Hall is only a short taxi ride from the center of Philadelphia; may be reached by regular surface transit routes and, in addition, a special bus line for convention visitors is expected to be in operation. The special busses will start from the Benjamin Franklin Hotel and stop at all the other leading hotels en route to Convention Hall; schedules will be posted in each hotel lobby. A map showing regular transit lines, hotels, railroad stations and other points of interest will be found on the attached insert.

Members of the Program Planning Council of the Packaging Division of the A. M. A. are: E. A. Throckmorton, chairman; A. B. Brackett, John L. Bradshaw, Frank C. Campins, T. A. Carlson, Gordon Cole, N. A. Fowler, Joseph Givner, W. H. Graebner, A. L. Green, Royal A. Hoffman, W. R. Hummel, Douglas Kirk, E. G. Kuhn, W. B. Lincoln, Jr., W. T. Markowski, W. L. Romney, Clinton K. Royce, L. B. Steele, B. H. Taylor, F. L. Triggs, Charles E. Waring and R. Wellbrook.

Members of the Exhibitors Advisory Committee are: Alan S. Cole, general manager of MODERN PACKAGING, chairman; Frank A. Biederman, A. B. Clunan, J. M. Cowan, Robert D. Handley, Roy E. Hanson, George Ingham, H. H. Jones, M. P. Junkin, L. L. McGrady, Paul Meelfeld, C. E. Schaeffer, Paul Thompson and M. A. Williamson.

The Exposition is under the management of Clapp & Poliak, Inc. The staff for A. M. A. includes Alvin E. Dodd, president, and Henry J. Howlett, secretary.

For those exhibitors who responded to a MODERN PACKAGING questionnaire, the following alphabetical list gives details of exhibits, names of key personnel attending and the hotel at which they will be staying (a complete list of exhibitors and booth numbers, as of press time, appears with the attached Guide to Exhibits):

A-B-C PACKAGING MACHINE CORP., *Booths 56–7.* Automatic case packer for bottles. *Personnel:* Omer A. Rupp, A. G. Bockhold, Carlyle A. Beihslich. *Hotel:* Benjamin Franklin.

ALUMINUM CO. OF AMERICA, *Booths 503–4–5.* Samples of application of foil, collapsible tubes, closures and bulk containers; demonstration of manufacture of foil bags, heat-sealed packages and closures. *Personnel:* F. A. Armstrong, A. C. Bakken, W. F. Courter, R. J. Denny, R. W. Dispennett, H. L. Dodge, R. V. Elliot, E. K. Farrand, J. J. Flannery, A. R. Gneiser, F. D. Goll, J. L. Hicks, T. M. Hill, R. L. Hoy, M. R. Kambach, F. S. Lally, J. G. McKown, V. N. Mooney, B. C. Mullen, Jr., J. E. Perry, D. O. Rowley, L. H. Russell, C. Sands, Jr., J. M. Schultz, D. B. Strohm, H. W. Terwilliger, T. A. Torrence, W. Turbeville, Kirk Usher, R. A. Wible.

AMERICAN CAN CO., *Booths 52–3.* W. C. Stolk, F. G. Jewett, J. Whitney King, Jr.

AMSCO PACKAGING MACHINERY, INC., *Booth 312.* Sample packages, machines in operation: bag sealing and making, wrapping, gluing, sandwich making and wrapping, automatic weighing and filling, sealing devices, conveyors. *Personnel:* E. E. Messmer, J. D. Sylvester, R. Gaubert, Mark H. Corley, John C. Corley. *Hotel:* Penn Sheraton.

ANIGRAPHIC PROCESS, INC., *Booth 522.* Sample Anigraph-processed containers. *Personnel:* Walter W. Clark, J. F. Zaun, T. F. Porter, W. F. Denney, M. A. Porter. *Hotel:* Ritz-Carlton.

ARMSTRONG CORK CO., *Booth 304.* Glass and closure samples. *Personnel:* R. A. *(Continued on page 224)*

TRANSPARENT CONTAINERS

Head of one of four assembly lines in Central States Paper & Bag plant producing either rectangular or novelty-shaped containers. Three creasing machines feed conveyor belt; girls glue and apply bottoms and lids. Hoses suspended overhead are for glue, delivered through dentist's spray nozzles. Output of one line is 5,000 daily.

Something like a mechanical revolution is going on in that branch of the plastics industry which produces transparent packages from semi-rigid sheet. In addition to the development of new, better and lower-priced materials, mechanical means are rapidly being found to produce package forms by drawing, by blow-molding and by die-cutting and creasing—eliminating nearly all the hand operations which originally made this type of package expensive.* The potentialities for expansion of this type of visibility packaging to low-cost products are enormous.

Several machine makers have fully automatic equipment capable of turning out transparent boxes at high speed in the final testing stages. The full potentialities of this package will be realized when these machines come into use shortly. Meanwhile, however, the box makers are making great strides on their own in the development of semi-automatic facilities and straight-line production techniques.

The new St. Louis plant of Central States Paper & Bag Co., where production of round, square and novelty shapes of cellulose acetate packages has been stepped up from 5,000 to more than 80,000 units daily, furnishes a significant example.

Production management of the "Showbox" division, headed by E. G. Elstrom, has been working on the peculiar problems of acetate package handling for the past 13 years. Research into the possibilities of automatic glue application, forming, lid and bottom attachment, etc., culminated just before the war in the establishment of a test line at another company plant. This line painstakingly experimented with various ideas for increasing production speed. When it proved sufficiently efficient for incorporation into standard production, the company drew up plans for the battery of conveyor-type processing lines which are an impressive feature of the new 180,000-sq.-ft. plant.

Sixty per cent of the former hand operations on transparent boxes are eliminated in the new production lines which are set up on the third floor of the plant. There are eight lines for producing circular acetate boxes and four more which produce either rectangular boxes or novelty bell, heart-shaped, triangular or multi-faceted plastic packages on custom order.

A typical line for producing cylindrical acetate containers is based on a two-foot rubberized conveyor belt

* Recent articles on these developments in MODERN PACKAGING: "Contoured," Feb., 1947. "Folded Plastic Boxes," June, 1946; "Low-Cost Plastic Sheet," May, 1946. "Automatic Manufacture of Transparent Containers," April, 1945.

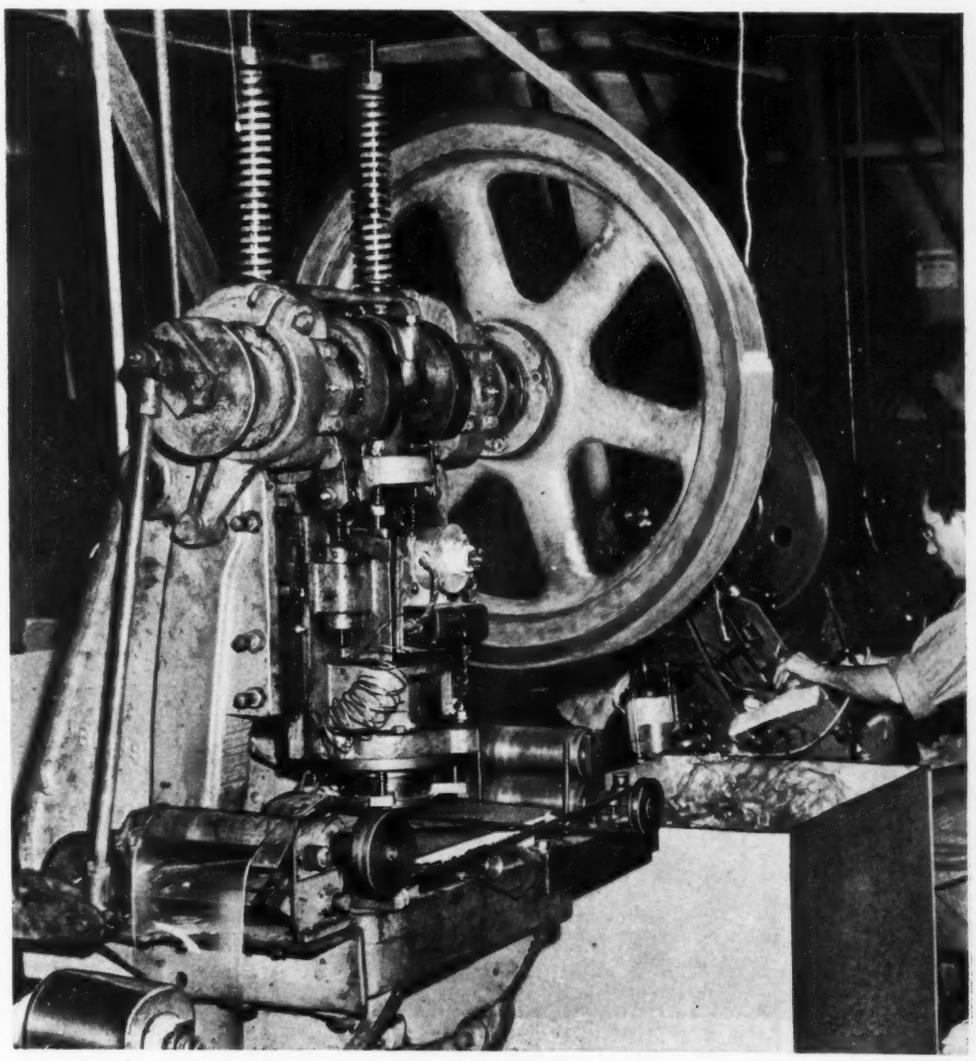
. . . mass produced

moving 20 ft. per minute, powered by a one-horsepower electric motor. On either side are five mandrel stations, each equipped with two spindles for forming the packages and two lever-operated, electrically heated units for beading the top edges. Past the mandrel stations is a 10-ft. space along the belt where four girls apply paperboard bottoms and lids—gluing in the bottoms, applying lids from a stock brought from lid-making machines and cartoning the containers for shipment.

In line operation, acetate sheets, cut to size in the second-floor cutting department, are brought to each girl at the mandrel position in cartons. Utilizing spindles and mandrels from $1^1/_2$ in. to 12 in., each station may produce any sized package—actually, as many as six or more operations are carried out at once. Sized sheets of acetate are wrapped around the mandrel, glued and a lever pressed to lift the 220-volt, electrically heated head unit over the spindle to bead the upper edge. The acetate cylinder is then placed on the moving conveyor belt, which carries it to wooden stop rails where a crew of finishers attach bottoms and lids.

In eliminating as many hand operations as possible, the company has developed an ingenious system for piping glue to every acetate-handling station. The glue, moved by compressed air from a central 100-gal. tank, is delivered by a suspended rubber hose from overhead pipes on all acetate package production lines. After testing various types of applicators, the management hit upon the idea of using standard dentist's pressure mouth spray nozzles and valves. These, which admit a fine stream of glue at high pressure, have proved ideal for the purpose and the lines, despite anticipated trouble, have never frozen up or clotted in heavy daily use. A 100-gal. charge of the tank lasts three to four days.

Production of the six lines averages 60,000 packages per day. Girls at the end of the line place lids and bottoms on all sizes of packages as they come down the conveyor and place the finished product in shipping cases slanted toward the end of the line on a cleverly worked out teeter-totter platform. When the case is filled, the teeter-totter is tilted up and the carton slides to the opposite end to be sealed, inspected, stamped and shipped. The shipping clerk who takes off the filled



Line of punch and drawing presses forms the lids for cylindrical containers. Production of lids is carefully timed in pace with box lines.

carton replaces it with an empty. Lifting up the platform end slides this box back to the end of the production line, ready to be filled.

Advantages of the line are many. Girls do not need to leave their work stations, each has only one operation to handle and six sizes of boxes can be produced simultaneously, if desired.

The susceptibility of some plastic materials to dimensional change in varying humidities has required that plastic lids for all containers be produced the same day; they may not fit properly if fabricated at temperature and moisture levels different from those existing when the container base is made. Therefore, a machine department for lids is placed between the round and the square container lines (at opposite ends of the building) which operates contiguously with both. Included are a punch press for die cutting of lid blanks and six convertible lid-forming machines which press plain transparent plastic lids, gold embossed or printed types, at a rate geared to scheduled package production on the main lines. Lids as finished are inspected and carried to the ends of all lines making round packages. A tight schedule is maintained to match automatic lid production with the six lines' package output. Bottoms are die-cut in paper processing rooms on the floor below. The company has developed a laminating roller machine which applies gold or silver foil to heavy gauge paperboard, used where packages are for candy or de luxe gifts.

An ordinary tin-seaming machine is used for applying metal bottoms, for canister sets, champagne packages, etc. Three girls take care of this operation. In the machine department also are a gold-leaf embossing machine for lids and a specialty machine devised by the company which cuts sheet acetate with notches for rectangular lids, still largely made by hand.

The four lines which handle both square packages and custom shapes have been built around company-built creasing machines which form the corners in these forms. Raw sheet acetate is received first at two company-built beading machines. These, incorporating a 6-ft. heated metal forming unit, nine rollers and a revolving knife, bead both edges on continuous strips of acetate and cut them to the proper length. The machines are adjustable to any width, within limits. The length of the segment which will form four sides of the square package is determined by 20 helical gear wheels which are inserted on the circular knife shaft. For beading one edge only, a special beader recently purchased is used. This is set up alongside the double-bead machines. It permits use of printed or embossed sheets.

The lines for these package shapes are similar to those for round packages, incorporating the conveyor belt, five work stations with glue nozzles on either side and the teeter-totter at the end of the line for cartoning. However, the heads of each line utilize from one to four special creasing machines for forming the angles of the blanks beaded as described above. Depending on the volume desired, anywhere from 10 to 24 girls operate each line. Newly beaded strips are delivered to the creasing machine operators, who form the required angles and start the piece off on the conveyor belt. Four girls glue the open corners together, while remaining stations in any combination of jobs apply bottoms and glue them in, apply lids, inspect the finished packages and carton them at the end of the line. Eight of the electrically-heated (*Continued on page 210*)

Typical time-saving innovations are these "teeter-totters" for shipping cases at ends of production lines. When case is filled, platform is tilted and the case slides to shipping clerk; empty case is delivered to girl packer in the same way.

APPLES

They're jumble-packed for self-service selling in a folding carton with tough Pliofilm windows

Smart green and red carton holds 4 lbs. of apples, has Pliofilm windows strong enough to resist puncturing by stems. PHOTO, OHIO BOXBOARD CO.

Experience has proved that mouth-watering apples, properly pre-packaged in consumer sizes in a container offering eye-appeal visibility as well as protection, are among the fastest selling of pre-packaged produce items. West Coast, Maine and Michigan apple packers are currently studying better ways of packaging their product. Maybe Mr. Willard Farnsworth, of Waterville, Ohio, has something to show them.

Last November Mr. Farnsworth, an enterprising apple orchardist, visited his box supplier and explained that he would like to have some kind of window carton that would hold 4 lbs. of apples, that could be filled by semi-automatic means and that could be closed without gluing or stapling. He did not want a carton that had to be "place packed" by hand (as most fancy apples have been up to this time) but one into which apples could be quickly poured after weighing.

The package illustrated herewith is the result. The carton is so constructed that it is shipped to the apple packer as a flat blank. Its special bellows closing device makes possible fast and easy setting up, filling and closing. Once closed, the pressure of the fruit on the inner flaps acts as a lock. To catch the shopper's eye the carton not only has large windows on the top and one side but it is attractively printed in red and green.

Mr. Farnsworth's toughest specification was for a window material that would be tough enough to stand up against the weight of the apples and particularly to withstand the shock of 4 lbs. of them being poured in, rather than hand-placed. The box maker knew this could be solved by the use of Pliofilm, which his tests showed had ample strength for the filling operation and also would resist subsequent puncturing by the apple stems. With the cooperation of the Pliofilm manufacturer and an adhesives maker, a special adhesive for applying this window material to the carton board was obtained and the box maker's research department worked out special attachments for his window-carton machine. It was a problem on which he had been working for some time and the box maker believes this is the first time that a Pliofilm window has been successfully applied on high-speed equipment.

Supermarkets in Toledo have been used by Mr. Farnsworth for extensive marketing tests. So far the package appears to have met his specifications in every respect. Store managers report that the package has sufficient strength for stacking and therefore lends itself to mass display; that it prevents bruising.

Since no machinery is required to set up, fill or seal the carton, it appears equally adaptable to small or large packers. Fruit packers and store managers who have seen it believe the carton is adaptable to other items such as peaches, pears, onions and potatoes.

CREDITS: *Window carton by the Ohio Boxboard Co., Rittman, Ohio. Pliofilm by Goodyear Tire & Rubber Co., Akron, Ohio. Special adhesive by Union Paste Co., Hyde Park, Mass.*

POSITIVE WEIGHT CONTROL

New electronic "traffic cop" kicks out intolerable packages and flashes signals to govern adjustment of filling machine, making possible large savings by a reduction of over-filling

In the last few years the managements of food and drug packaging plants have become increasingly concerned with the problem of filling-weight control.

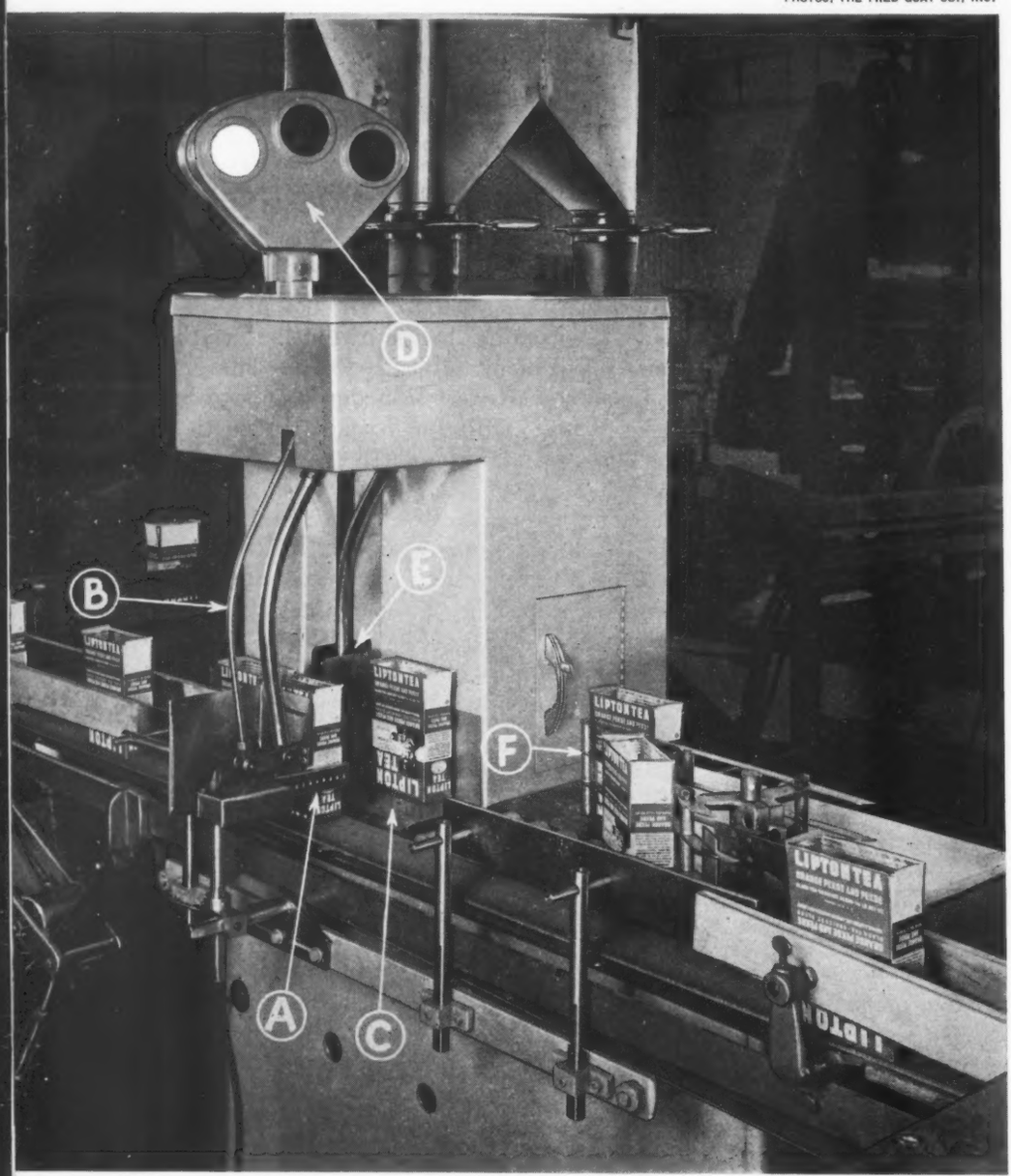
The imminent return of keen competition in a period of high material and labor costs lends new urgency to the need for positive control of package weights in the interest of economy. Even manufacturers of low-cost products are beginning to realize that the over-fill or give-away, which seems so insignificant in a single package, may amount to a sizable proportion of their profit margin when figured over a year's production.

To insure conformance with minimum stated weights the average packager will set his filler, as best he can, to fill from $^1/_8$ to $^1/_2$ an ounce over the stated weight. A reduction in the average fill of only $^1/_{32}$ *of an ounce* will result in an annual saving of nearly 14,000 lbs. of product for every filling machine operating at the rate of 60 packages a minute.

There are other compelling reasons why packaging plant managers are today vitally interested in closer weight tolerance.

The Federal Food and Drug Administration, as well as state and local weights and measures authorities, have served notice—and are backing up their warnings with action—that with the return to peacetime conditions they will no longer tolerate slack-filled packages, however innocent the packager may be of evasive intent. Anxious to avoid embarrassing publicity, the

PHOTOS, THE FRED GOAT CO., INC.



1. Weight-control machine in action at Lipton Tea plant. Package on conveyor strikes and closes microswitch *A* and starts machine cycle. Arm *B* sweeps package onto platform *C* where it is automatically compared with tolerable weight. Red flash on weight frequency indicator *D* indicates package overweight, green light within tolerance and amber light underweight. Arm *E* then pushes package into deflector *F*, which either kicks it out of the line or shunts it back onto the conveyor, according to weight signal.

2. Over-all view of U-shaped Lipton line, showing how weight checker fits in between filler (left) and top-sealer (right). Operator collects rejected packages and empties them back into filler, also watches weight-frequency signal lights to determine when filler needs adjustment.

packager is more than ever apt to engage in costly over-filling of his product.

As a reaction from wartime conditions consumers are becoming increasingly observant and critical. Alert sales departments are putting pressure on package production men to avoid any possibility of complaint arising from under-filled containers.

And over-filling may be costly in ways not generally anticipated. More and more producers of packaged products are now shipping to foreign markets. In many countries heavy customs fines and penalties, sometimes equal to the value of an entire shipment, are the lot of any manufacturer whose packages are found even a fraction of an ounce overweight—such overweighing being arbitrarily classified as an attempt to avoid tariff duties. The February issue of MODERN PACKAGING[1] cited the case of one manufacturer of a food product who was refused entry of a $200,000 shipment to a Latin American country because some of the packages were found to be slightly overweight.

Why the problem

The filling-weight problem exists because even the best filling machines never dispense exactly the same amount of product in each container. Also, as every machine operator knows, there are times when a filler will fill with a relatively small variation from package to package and others when the operation seems to be erratic and the variations relatively great. If the reasons for these variations were more generally understood and if the average filling machine operator knew when and when not to look for trouble, the costly practice of over-filling would not be so widespread.

In the majority of packaging plants positive methods or routines for controlling filling weights have up to now not been practical. Instead, the operators have been allowed a package over-fill tolerance that experience has shown to be large enough to keep the underweight packages in the finished pack at an absolute minimum. In other words, they are allowed to raise the average level of fill high enough so that the lightest-filled package will theoretically meet the legal weight minimum.

The extent to which the food packaging industry indulges in the practice of over-filling in order to avoid underweight packages may be observed by selecting packages at random from the shelves of a grocery store and check-weighing them. A 7-oz. package of breakfast food is $1^1/_2$ oz. heavy. The weight of the contents of a "pound" package of coffee is $16^1/_2$ ounces. A 5-oz. popover mix is $^1/_{16}$ of an ounce overweight and a 14-oz. cake mix is overfilled by $^3/_4$ of an ounce.

The primary reason why more positive methods of filling-weight control have not been generally used in the past is that they depended too much on the personal element for success. Filling-weight control by statistical methods has been used to some extent ever since filling machines have existed. Recently a number of plants have been interested in a new "control chart" method.[2] While many plant managers have considered statistical methods of this kind or have used them at some time or other, the idea usually has been dropped because it was complex and difficult to administer. Methods in use up to now have required the constant supervision of highly trained operators using involved weight-sampling and control routines.

Solution at Lipton Tea

An installation on tea-filling lines at the Lipton Tea Co. plant in Hoboken recently has demonstrated the great possibilities of a new, simple, electronic machine which automatically weighs each package and kicks out any that are over or under the assigned tolerances before they are closed and sealed. The operation requires no slowing-down of high-speed packaging lines and it insures not only that no dangerously slack- or over-filled packages will be turned out, but that the tolerances over and under will be held to smaller limits than

[1] See "Foreign Markets," MODERN PACKAGING, Feb. 1947, p. 87.

[2] See "Filling-Weight Control," MODERN PACKAGING, Oct. 1946, p. 118.

3. A chart recorder (on wall at right) provides written record of fillers' performance. It puts on paper the same signals flashed by lights. It may be built in machine or installed in plant manager's office, as shown here.

have heretofore been practicable on high speed lines.

The machine is a virtual traffic cop, flashing a red, green or amber light for each package it weighs according to whether it is under-filled, in tolerance or over. Although the "under" and "over" packages are automatically shunted out of the line, the light signals are important because they enable the operator instantly to determine by the frequency of the red and/or amber flashes when the filler is out of adjustment and which way it is out. Furthermore, the machine will keep a continuous graph record on a chart recorder either built into the machine or remotely located in the production manager's office or wherever desired in the plant.

The operation is based on the same sound principles that govern every approved method of filling-weight control. Briefly, every filling machine has filling error limits resulting from such inherent causes as friction, vibration, play in the parts, etc., which join together in random combination according to the laws of chance. These combinations produce variations in filling weight, the upper and lower limits of which can be determined by simple statistical methods. In addition to these inherent causes, there is another group of variation-producing causes that include substantial changes in density and other changes in the characteristics of the material; clogging of the filler; failure of a machine part; the slipping of an adjustment, etc. This second group of variation-producing causes can be corrected or compensated so that the filling machine can again fill to within its inherent error limits.

The only basis for efficient operation of filling machines is the ability to detect immediately and correct an unsatisfactory operating condition. By doing this automatically, the new weight-control machine answers one of the principal objections to other methods of filling-weight control.

The machine at Lipton's operates in the following manner (see Figs. 1 and 2): First, it is moved up beside the conveyor where it operates independently of and without breaking into the conveyor. The speed of the cycle of the weight-control machine is then adjusted with its variable speed drive so that it is slightly faster than the filling cycle. Every package of tea on the conveyor strikes and closes the microswitch "A" and starts the machine cycle. Sweep arm "B" sweeps the package off the conveyor and onto the high-speed weight comparator "C." Here, in a split second, the package is compared with a factor weight and the assigned error tolerance and classified into one of three weight groups. The result is instantly communicated to the weight frequency indicator "D." If the package is filled above the upper control limit, it is indicated by an amber flash. A green flash signifies a package filled within the assigned tolerance and a red flash denotes a package filled below the lower control limit. The pusher arm "E" then pushes the package off the weight comparator and onto power-driven rollers which take it to the deflector "F." The deflector moves either to deflect the package back onto the conveyor or to eject it, depending upon the weight classification of the package as telegraphed from the weight comparator and the setting of the deflector switches.

As rejected packages collect at the side of the machine, they are picked up by the operator and returned to the filler. The contents are emptied back into the filler and the packages are returned to the head of the line.

A satisfactory operating condition will result in almost continuous green flashes with only a very few random red or amber flashes. If the filler were to be affected by some cause such as a sudden large increase in density in a new batch of material, the frequency distribution of the package weights would undergo a marked change. The frequency of the green flashes would decrease while the frequency of the amber flashes

would increase. If the change were great enough, only the amber light would flash as the overweight packages reached the weight-control station. These amber flashes would soon attract the attention of the operator, who would start to cut back the filler. By watching the increasing frequency of green flashes, an experienced operator can quickly bring the filler back into control. And of course none of the overweight packages during this period of adjustment or at any time would be going through the line, but would be culled out by the machine.

If a major shift in density toward lighter weight were to occur, the red light would flash almost continuously, the ejected underweight packages would start to collect and the operator would of course adjust the filler. In some plants a "howler" or some other audible alarm has been found effective as an additional means of calling the operator's attention to an out-of-control condition.

The addition of a chart recorder gives management a most valuable permanent record of their fillers' performance and can lead to the elimination of some of the inherent causes of filling-machine weight variations. However, as would be expected, succcess along these lines is largely based on judgment, knowledge of the process and technical skill in tracking down unwanted causes of variation to their source.

Location of the chart recorder in the plant manager's office (see Fig. 3) has been found a very effective means of keeping operating personnel on their toes. Since one multiple-pen recorder can record the operations of as many as six filling machines, the plant manager can tell at a glance exactly how operations are progressing and can personally call attention to any continuing maladjustment. Furthermore, the charts provide him with a very effective check on the efficiency of operations during his absence.

The recorder graphs the performance of each filler by means of three pens on a time chart. A "throw" of the middle pen indicates a satisfactory package. The upper pen is for packages weighing less than the lower weight limit and the lower pen is for packages weighing above the upper limit. A mark is made by one of these pens for each package that passes through the weight-control machine.

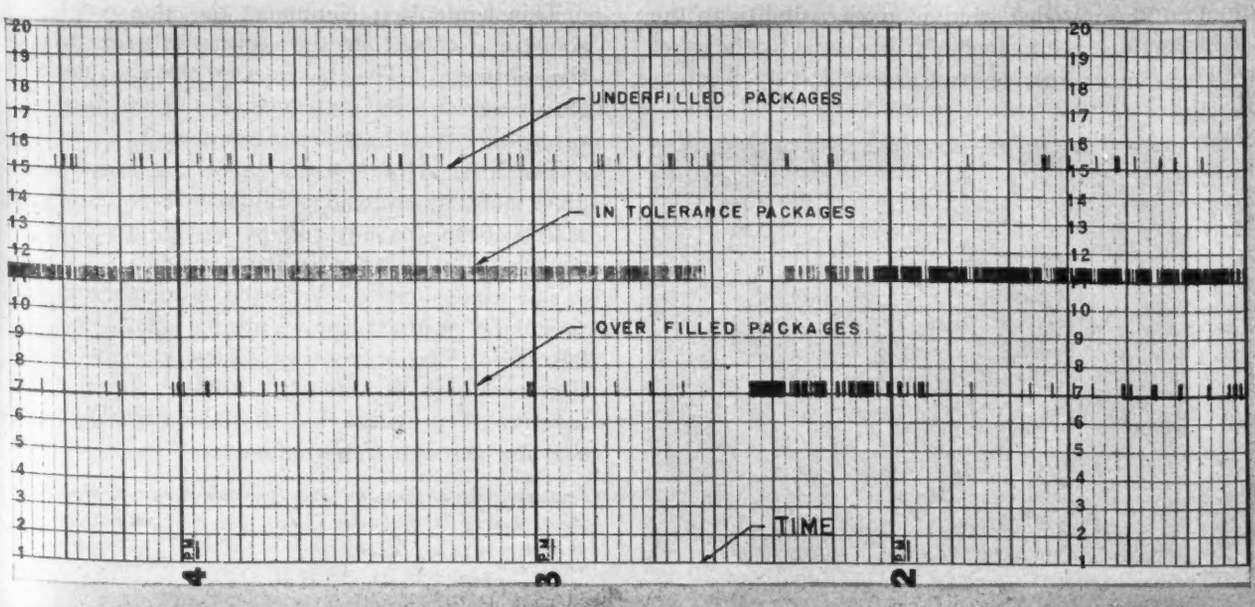
The section of a control chart shown in Fig. 4 records a typical $3^1/_2$-hour period of operation of a single filling machine. The chart reads from right to left. As indicated by the almost solid mass of marks along the center line, the filling machine was operating satisfactorily from 1 to almost 2 P.M. A little before 2 P.M. marks started to pile up on the lower line, indicating that a number of overweight packages were coming through and by 2:10 the machine was definitely overfilling. As the chart shows, the filling machine was stopped for approximately six minutes while it was cleaned and the filling operation—after the previously over-filled packages had been cleared out of the line—was resumed on an "in control" basis at 2:30. For the remainder of the period the filling operation was in satisfactory control, with only a few packages turning up outside the control limits one way or the other.

Other product applications

Tea is a good example of a very lightweight, high-cost item on which important savings can be made by this type of close, positive weight control. The machines have many applications in other industries.

In one frozen food plant tests have indicated a possibility that weight indication and control machines can be used to eliminate most of the hand labor now employed to check-weigh and correct packages of products that are so difficult to handle that they are packed either by hand or to wide mechanical filler tolerances. The continuous weight indication makes it easier for either the hand packers or the filling-machine operator to

4. Typical section of a chart taken from the recorder shown in Fig. 3. It shows a gradual shift to over-filling, starting at 1:54 P.M., a shutdown for cleaning of filler and then a return of weight-control machine to satisfactory operation.



regulate the fill; consequently the package weight variation can be reduced. As a result it is usually possible to hold 85% of the total pack to acceptable limits. Under these conditions the 15% of the pack that will be ejected for weight correction can be handled by only one person instead of the four usually required on a line operating at 60 packages per minute.

The machines probably will find similar applications in the package of fresh produce.

Provision is being made to install weight-control machines on some of the new fully-automatic frozen food packaging lines using the recently developed composite fibre-metal containers.[3] In this installation the machines can be instrumental in reducing the filling-weight variation caused by changes in the moisture content of the material.

Weight-control machines are particularly effective when used as weight selectors in plants that bulk-pack very high-priced commodities such as nuts and candy. The procedure is to determine by experiment the percentage of the total pack that should be ejected for weight correction in order to show the greatest savings. The ejectors are then set to eject packages weighing more than the assigned limits as well as those that are underweight. After the packages have been weight-corrected by hand, they can then be put back onto the line for top-sealing and wrapping.

With today's high labor costs it will sometimes be more economical to empty the ejected packages and run them through the filler again than it would be to correct the packages by hand. To facilitate this, a gravity type conveyor can be installed so that the ejected packages can be collected and directed back to a point between the filler and the package maker. At intervals during the day an operator can empty the packages and feed them back into the line.

In a search for more effective methods of controlling filling weights, a weight-drift indicator has been used experimentally with the weight-control machine. This drift indicator shows whether the average weight of the day's pack is increasing or decreasing. In other words, it shows the trend, while the weight-frequency indicator gives the operator a mental impression of the frequency distribution of the package weight into the three weight groups. The indications are that the drift indicator will aid measurably in the control process.

One of the most interesting possibilities for the future is the direct application of filling-weight control to the filling machine itself. It is easy to conceive of the electrical impulse which now motivates the weight-frequency indicator operating instead on the filler control. If such an arrangement can be successfully engineered—and it is now being studied—it is possible that filling weight can be held to a very close limit at all times despite major changes in the density or conditions of the material.

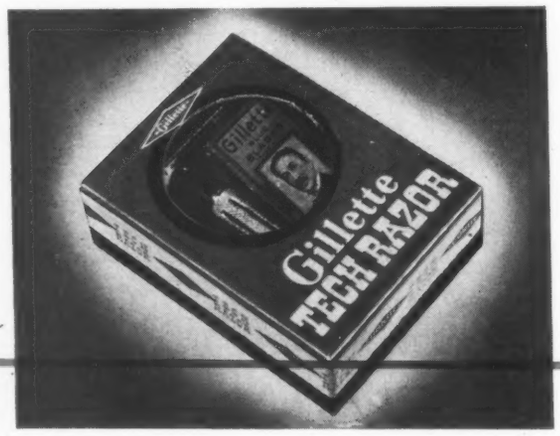
[3] See "Glenmar Farms," MODERN PACKAGING, Dec., 1946, p. 93.

CREDIT: *Weight-control machine, "Weightrol," developed and manufactured by The Fred Goat Co., Inc., Brooklyn, N. Y.*

WINDOW LAMINATED BETWEEN BOARDS

A new type of lamination has been used for the window box adopted by Gillette Safety Razor Co., for its Gillette Tech Razor.

The rounded window gives visibility to the product, but instead of being made by the usual method of gluing transparent acetate sheeting to the underneath side of the cardboard, the sheet is laminated between two sheets of paperboard.



This lamination eliminates the glue patch sometimes caused by the acetate adhering to the cardboard. The construction also provides sturdiness for a box that men who like to keep razor and blades together can re-use.

The method of box fabrication, it is said, gives more dimensional stability to the window material and the box can be stored for long periods before using without warping.

The window circle is bordered with color and the name of the razor is printed in reverse lettering. The only other design element is the trademark at the top. Further familiar identity is provided by the blade package showing through the window.

CREDITS: *Box, Imperial Box Co., Brooklyn. Acetate sheet, Lumarith, Celanese Corp., N. Y. Lamination, Transversion Co., Brooklyn.*

TOOLS
in styrene boxes

▲ This red and black styrene kit for these hole-cutting tools represents a change from more conservative forms of packaging tools.

Precision tools such as these auger bits are firmly held in place and protected during transportation and display by this styrene box. ▶

he packaging of tools in plastic was first utilized by Bruno Tools, of Beverly Hills, Calif., as a better means of protecting tools during transportation, storage and display. The company believed that a plastic case would not only be stronger and less likely to break than previous containers, but that it might be made to protect the delicate parts of their precision tools and hold them firmly in place.

The first of the company's kits to be packaged in this manner was that containing hole cutting tools. Molded plastic boxes for an auger bit set and a boring bar set quickly followed. For all of these packages polystyrene was used—selected in part because of its good dimensional stability.

In addition to the protective qualities offered by these molded polystyrene boxes, the company found other plus values in its new packages. Among these were the packages' ability to *sell* tools. This was first called to the attention of the manufacturer by dealers who reported increased sales of tools packed in the 1946 Christmas package made of black and red polystyrene. Much of the credit for increased sales in this package was laid to the color factor. It attracted attention and added to the appearance of counter displays—thus rousing consumer interest and stimulating sales on impulse which might not otherwise have been made.

Another plus value of the plastic boxes was their economy of production. After using cardboard boxes, paper containers, cellophane wrappings and wooden cases and finding them expensive and unsatisfactory in one respect or another, the company was rather surprised to find the plastic boxes to be economical as well as suitable.

Following the success of the first Christmas packages, Bruno Tools has made all its subsequent tool packages of plastics. All cases are made by the same methods, using the same materials. The cases are molded in a four-plate stripper-type mold with two plates floating and the mold is operated in a standard 8-oz. Reed-Prentice press. Unusual from the molding standpoint is the fact that the cavities are in the cold half of the mold. An hydraulic press is used to hot stamp the trademark on each case, using a special paste.

CREDITS: *Boxes molded by South Gate Tool Engineering Co., South Gate, Calif., using Monsanto "Lustron" polystyrene. Hot stamping by Cryco, Inc., South Pasadena, Calif., using paste supplied by Printers Supply Corp., Los Angeles.*

Super Suds front panel stays the same, but back panel (above) has been changed to carry this series of nine "testimonial advertisements" pointing out advantages of Super Suds for a variety of daily cleaning purposes.

One by one, as the supply situation improves, the Colgate-Palmolive-Peet Co. is putting on the market new products in new packages and redesigned packages for a number of its long established brands.

Each item is a part of the company's broad planning for revamped product lines to meet the requirements of changing merchandising trends and consumer preferences. So far on the market are two new packages for two new products in the toiletries and cosmetics group—a household package for a new cleanser called Ajax and a modernized series of Super Suds cartons with more display value. Soon to appear will be a complete redesign of all the packages in the Cashmere Bouquet toiletries line.

This design program is under the direction of William A. Troy, head of Colgate's own design staff, in cooperation with the company's merchandising, sales and production departments, although a leading independent designer was employed for styling the Cashmere Bouquet line.

First to be announced a few months ago was Colgate's cream deodorant called "Veto," in opal glass jars with lithographed closures. Veto is sold in four popular-priced sizes, each in a colorful identifying carton with gray-green background and red and blue lettering.

Now Colgate enters the cake make-up field with "Beau-Cake," a new product in the Cashmere Bouquet line. The carton gives the public a preview of a new motif to be used as the basic theme for all of the cosmetic products, redesigned and new, to be presented eventually by Colgate under the Cashmere Bouquet trademark.

A reproduction of a piece of cashmere imparts a textured feeling to the femininely pink background color of this design, on which is a central stylized floral theme in shades of pink, gray blue, red and white. A lacy border in similar colors frames the package and gives it a distinctive identity that American women everywhere will soon come to know and remember. The product name "Beau-Cake" is in red script, with brand and

Preview

One of country's largest packagers recognizes new package trends with new designs. Super Suds gets new back panel treatment; cake make-up package gives glimpse of basic new theme for Cashmere Bouquet

Illustrations are all line drawings reproduced from actual photos of women and children who have appeared in Super Suds advertising. Direction copy, formerly on back panel, is shortened and now appears on side panels.

the company name in gray blue sans serif lettering.

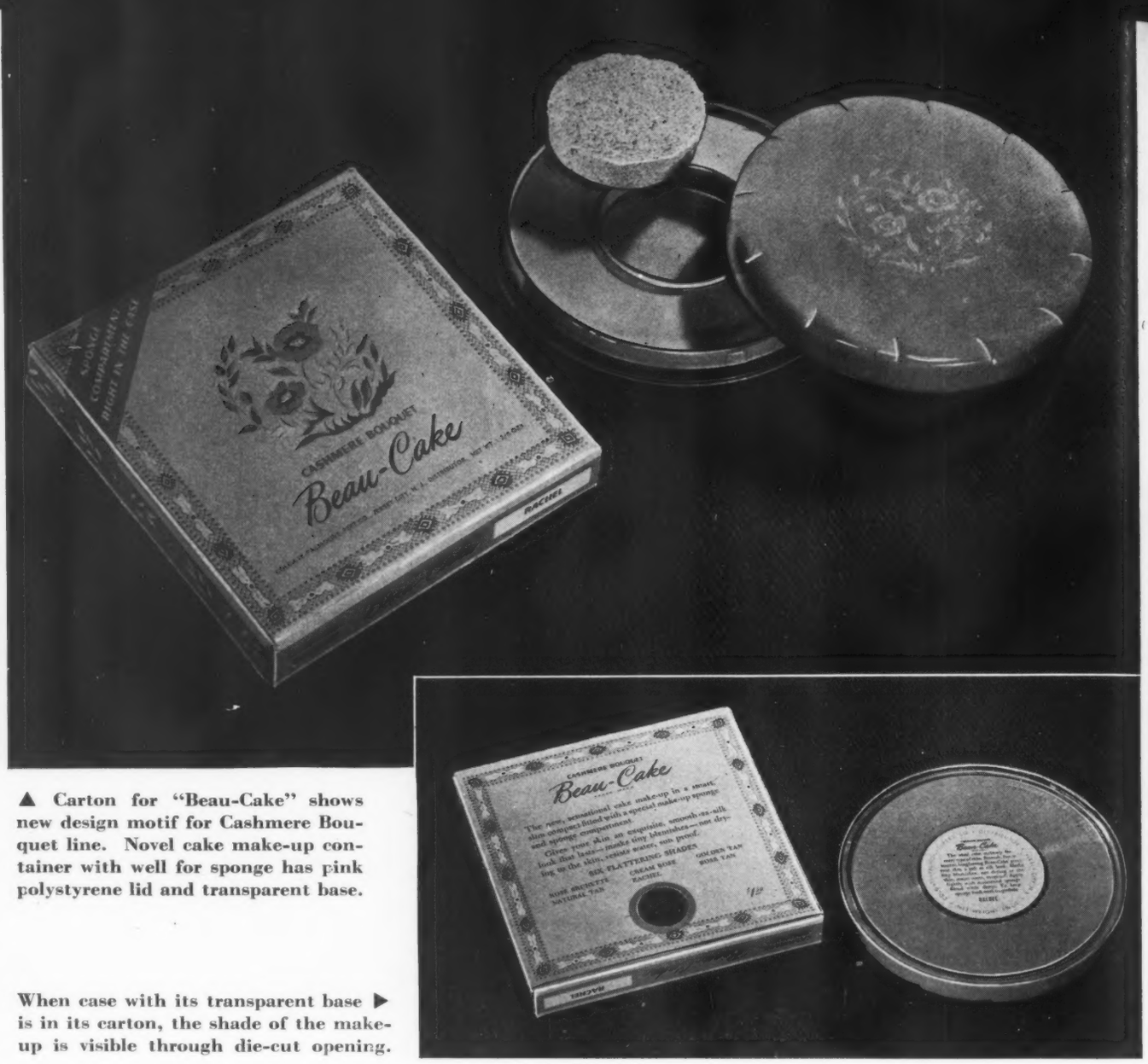
The cake make-up case is injection molded of polystyrene; the lid is opaque pink material with the Cashmere Bouquet floral motif molded on the top. The base is clear transparent polystyrene so that the shade of the make-up, which is available in six colors, may be seen through the container and also through the die-cut opening provided in the back of the carton.

The special well for applicator sponge in the base of the container is an innovation in the cosmetic trade. This compartment is molded as an integral part of the container base. A cam-action locking device molded at a tolerance of 0.002 of an inch provides a secure closure. The lid is so molded that it does not rest directly on the base, thus allowing for ventilation and escape of moisture from the sponge. A circular paper label on the bottom of the container conceals the sponge and also provides space for directions and other informative data and trademark identification. Selling copy about the sponge feature is carried on a diagonal printed strip across the corner of the outer carton which reads, "Sponge compartment right in the case."

The cake make-up is loaded into the plastic container in powder form, then compressed. Loading is for the most part a manual operation. To prevent the powder from filling the sponge well, metal disks are inserted into this section before filling and are not removed until the powder is compressed. Since the disks are slightly larger than the circle of the well opening, they prevent the make-up powder from smudging the container and then aid in achieving a neater fill.

Colgate's new treatment of the back panels of the Super Suds cartons is a further indication of the importance manufacturers of mass market products are giving to the use of package surfaces as an advertising medium.

The back panel of the Super Suds packages formerly carried a large amount of copy about how to use this powdered soap. Now this has been changed to carry a series of nine pictorial treatments, each one of the nine



▲ **Carton for "Beau-Cake" shows new design motif for Cashmere Bouquet line. Novel cake make-up container with well for sponge has pink polystyrene lid and transparent base.**

When case with its transparent base ▶ is in its carton, the shade of the make-up is visible through die-cut opening.

depicting a separate testimonial about why housewives like Super Suds. The illustrations are line drawings reproduced from actual photographs used in Super Suds advertising so that they realistically portray nine typical American housewives using Super Suds for dish washing, for laundry in a washing machine, for washing table linens, for doing heavy wash, for washing a railroad man's work clothes, for laundering children's clothes and shirts. The ninth one points out the time-saving feature of Super Suds.

The familiar face of the Super Suds carton remains unchanged, but the informative copy formerly on the back panel has been reduced and is now carried on side panels.

The new pictorial treatment is aimed for more effective display in windows or on supermarket shelves and to use package space for as powerful an advertising story as the company uses in its magazine and newspaper space.

A new foaming cleanser called Ajax has just been introduced by Colgate in a metal-end fibre can. Design is in red and black with a line illustration in black on white—the background simulating a tile wall suggestive of kitchens and bathrooms where this product is used for cleaning and polishing. The same design is repeated twice on the wrap-around label so that it is visible no matter how the package is placed in display. Red was selected as a color recommended in a survey of dealers who were asked what predominant color they thought would be most effective for a new cleaner.

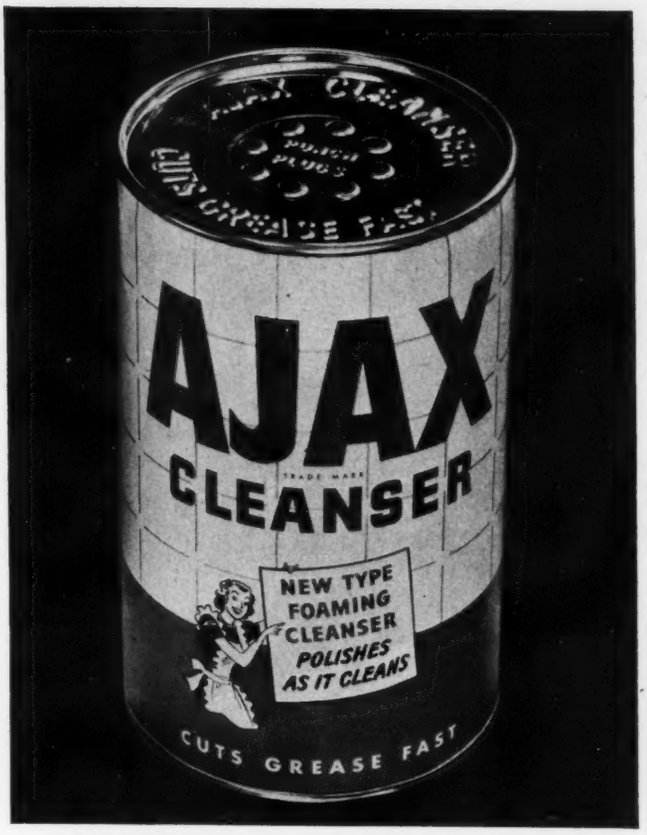
Colgate was among the leaders in making the best use of substitute packaging materials during the war period

and is still devising means of surmounting possible shortages of materials that are difficult to obtain. Just recently salesmen were given a useful idea for assisting dealers in making floor stands without the use of paperboard.

The idea was first adopted for Cashmere Bouquet soap which, incidentally, will keep its present dress and will not be redesigned to conform to the new packages for the Cashmere Bouquet cosmetic line.

The basic structure of the floor stand is formed by taking two corrugated shipping containers for No. 2 cans and placing them one on top of the other, wedging one cut end-piece into the top of this assembly. The salesman then carries in his car a roll of lithographed paper bearing a four-color promotional design for Cashmere Bouquet which he gives to the dealer, assisting him in taping it over the shipping cases. A lithographed riser piece is supplied as background to complete the assembly. So successful have these displays become that Colgate is planning to use them also for Palmolive soap and Ajax cleaner until the board situation is improved.

CREDITS: *Cashmere Bouquet design, Josephine Von Miklos, New York. Cake make-up container, Sterling Plastics Co., Union, N. J. Material, Loalin made by Catalin Corp., New York. Carton, Lord Baltimore Press, Baltimore, Md. Lithographed paper for displays, Trade Lithograph & Printing Co., New York. Riser piece, Kindred, MacLean & Co., Inc., Long Island City, N. Y. Ajax label, Quadri Color Co., Brooklyn. Ajax can, American Can Co., New York.*



Ajax design is red on a white background with a line drawing in black. Red was selected as the best color for a new cleaner package after the company interviewed a large group of dealers, asking them what color would be most predominant on shelves.

Colgate salesmen help storekeepers make displays without paperboard. Two corrugated shipping containers placed one atop the other and covered with lithographed paper from a roll, and a riser piece, make the effective floor stand shown here.

Only one soap gives your skin this exciting Bouquet
SELF-SERVICE
Cashmere Bouquet
Soap
Adorns your skin with the fragrance men love

COLOR PLATES, IMPORTED DELICACIES CO., INC.

Unusual shapes, embossing, coloring and fine workmanship distinguish these lithographed aluminum boxes from England. "Russian Enamel" pattern shown here is 9 by 6 by 4 in., gold-lacquered inside and bottom and has hinged lid.

IMPORTED 'TINS'

These beautiful English boxes are not tin but aluminum,

lithographed and embossed in classical decorative motifs

Just as we have looked to England for fine woolens in the tradition of practical, homespun serviceability, for years American manufacturers have studied with interest England's metal lithography. Coloring, finishes, patterns, workmanship and durability have always been keenly watched by American metal box technicians. Not that any American metal lithographer would admit that the fine English craftsmanship could not be matched by his own mass-production methods, but some of the English containers are works of art equal to the best that this country can produce and all of them are worthy of study.

Naturally, during the war metal containers were shelved for more urgent business at hand and little thought or attention was given to the unlimited possibilities of decorative metal containers for packaging purposes. However, now that metal has come into its own again, merchandising men are once more looking to metal for economical use-value packaging.

Last year the first postwar boatload of lithographed metal containers—about 30 styles—reached these shores from England and were snapped up so quickly for packaging, house furnishings and novelty uses that the alert American importers of these colorful boxes, in conjunction with their British source, designed a new diversified group of 21 containers to be marketed at acceptable prices suitable for every conceivable product that lends itself to packaging.

Interestingly enough, the current British containers are being made of aluminum, a metal not previously considered for highly decorative, lithographed containers. Not only is aluminum in better supply than tin-

plate, but it makes a lightweight, rugged container that has a quality "feel"—and no "tinny" sound. The beautiful way in which aluminum takes lithographed color is shown by the four-color plates printed herewith. Many of the aluminum containers are lacquer-finished inside for added beauty and wearability. They are, of course, rustproof.

Each container is individually designed. The principal difference between these and domestic decorated boxes is the finish. There are variations such as French enamel, Limoges porcelain, satin-finish gilt and colored gilt combinations, antique and boudoir finished.

Each color is applied separately in huge ovens and baked on in a series of bakings to insure toughness and lasting authenticity of the color pigment. Embossing has been put to very effective use where flowers or birds standing out in relief would add to the richness of the pattern. This treatment is extremely interesting from the standpoint of its increased value and "touch" appeal. The added cost is negligible.

The covers are a very important detail. Each one is designed for maximum utility. Some are hinged. Others are detached. Many of the covers are double walled, in treasure-chest style, where extra protection may be desirable. All edges are either rolled or overlapped to eliminate rough or open edges.

Patterns or designs are copied or adapted from collectors' items, paintings and tapestries to resemble china or pottery and worked into shapes practical and applicable to packaging of cosmetics, jellies, fruit (fresh or glacéd), candies, cookies, fruit cakes, jewelry and a myriad of other items. They make ideal gift packages and are doubly interesting in packaging because of their re-use value.

Several of the standard boxes are holiday units suitable for Easter, Christmas, etc. Others may be used for infants' or children's cosmetics or candy items.

A low decahedron container done in a French enamel motif has a double-walled lid. The flower sprays are rose, lilac, blue, purple, red, green and white divided by a golden classic floral design. The base color is royal blue embellished with gold leaf sprays veined in red. Inside and bottom are embossed and gold lacquered.

An unusual corner fluted box with a hinged lid has bunnies in brown on old ivory with red bow ribbons. The sides are adorned with green grass and gold outline sprays. The box is gold-lacquered inside and bottom.

An egg-shaped box with a detached lid has a design of chicks done in yellow with white eggshells, dandelions and green grass. The base color is purple adorned with silver-white floral sprays.

An oblong jewel-type box with a hinged lid is suitable for anything from candy to cosmetics. The full color central scene is framed in gold scroll-work on a base of rippled Fauntleroy blue. In the corners are red and white roses and blue field flowers also bordered in gold.

One container suggests a cookie jar or bath-salts box. The natural-color orange tree pattern runs all around the barrel with green leaves and warm, shaded pale orange background, with ivory stipple effect. This box has a white-enameled, double-walled lid and is embossed throughout.

A container resembling an oriental bowl is done in cobalt blue and pale gray. The roses which cover it are in several shades of pink and red with the tiny flowers in gold and natural colors. The base color is ivory.

A hectagonal powder box has French costume figures as a motif. The figures are in blue, gold, ivory and rose on an ivory background bordered in gold. The tiny flowers are white with gold petals on a French red base.

One deep octagonal box embossed with an oriental pattern is adaptable for spices, tea or even cosmetics.

Leading makers of fine candies have been consistent users of these imported metal containers. Most of them started out with the large-sized boxes and were surprised to find that the small boxes also sold well. Among them have been Loft's, Barricini's, Huyler's, Schrafft's, DeMet's, Fraelinger's of Atlantic City and Whitman's.

In the grocery field, the S. S. Pierce Co. of Boston is using the boxes as all-year-round gift packs for jellies, jams, coffee and tea. Tea packers use the boxes both for loose tea and for tea balls. Among them are John H. Wilkins, Stephen Leeman and Jordan Marsh Co.

Sutter Bakers pack cookies and cakes in the boxes. Florida fruit packers use the boxes for fancy and glacé fruits. Such department stores as S. H. Kress and R. H. Macy use them in their housewares department.

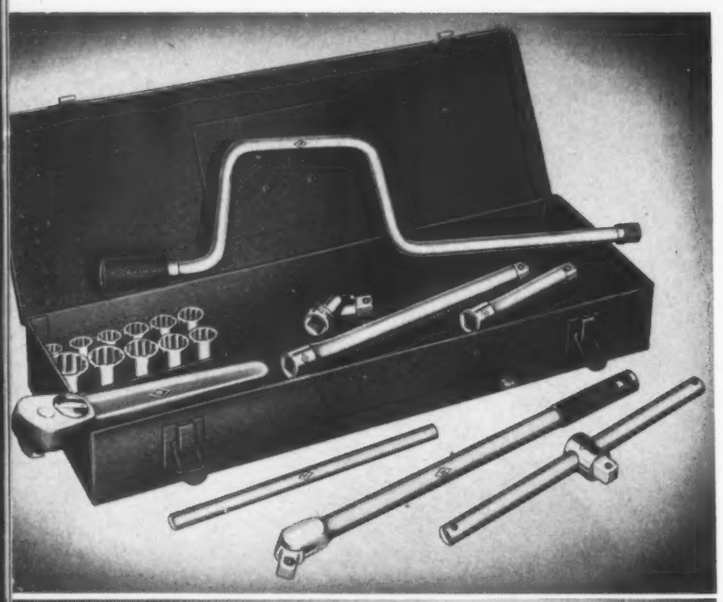
Prices of the group of imported containers now available for selection range from 25 cents to $1.02 each. The minimum order is 100 (one case), but according to the distributor some patterns are available in carload lots. Some of the patterns may be confined to a single exclusive line.

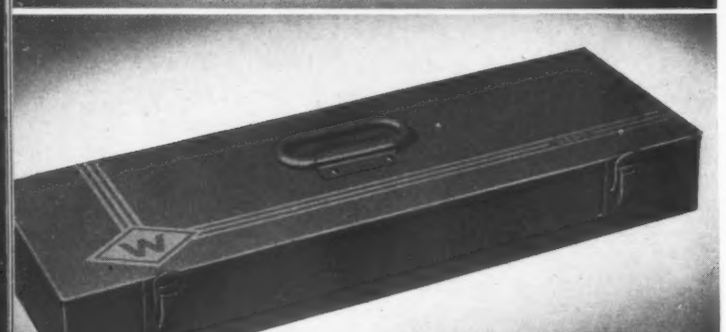
CREDIT: *Containers imported and distributed by the Fancy Container Division, Imported Delicacies Co., Inc., New York.*

Popular for candies and biscuits is "Bonbonniere," which has unusual baked porcelain type finish.

CUSHION WRAP

A low-priced tool set is protectively packed in assembly operation





Shown without their protective wrap, these are tools and the re-use box in which they are sold.

The average mechanic, vocational or avocational, is impressed with protective packaging as he saw it developed during the war. When he goes out to buy a set of tools, he is impressed with a package that not only gives him re-use utility, but in which the manufacturer has taken some pains to protect the tools.

In marketing a new low-priced set of "Diamond 'W'" socket tools, J. H. Williams & Co., Buffalo, wanted a good protective package at a minimum cost.

They adopted a simple metal box with hasp fasteners and decided on cellulose crepe wadding in economical blanket form as a cushioning material. The cushioning protects the surfaces of the tools and tool parts and makes a snug-fitting box without expensive fittings.

This is the company's first entry in the low-price field. Since the line was announced, jobbers have been clamoring for it and orders have piled up.

This has permitted Williams to organize the packaging operation on an assembly-line basis. At the start of the line a girl worker takes sheets of 0.25-gauge cellulose wadding and beds them in the boxes. As the boxes move down the line past a row of packers, each packer takes a tool from a vertical supply bin directly in front of him and places it in the prescribed position in the box. The wadding is folded around and over the tools, the box is closed and it is ready to ship.

CREDIT: *Cellulose crepe wadding, "Kimpak," by Kimberly-Clark Corp., Neenah, Wisc.*

First step in packaging line is the placement of creped cellulose blanket in bottom of box.

As the boxes move along, tools are taken from supply bin, placed in box and wrapped in wadding.

Automatic CELLOPHANE BAGGING OF FROZEN FOODS

Machine provides a continuous process, making duplex bags from rolls, filling and heat sealing them at a rapid rate

A new continuous process packages frozen foods in cellophane, producing in one minute 40 or more transparent bags sealed and ready to catch the eye of the shopping housewife. It applies production line methods to frozen food packaging, enabling a single operator to produce packages at this rate.

The advance has been made possible by engineering research that adapted a standard automatic cellophane envelope machine to the making of packages of considerably greater weight and bulk than bags for peanuts and candies, for which the machine was originally designed, and by development that provided cellophane to meet the specific needs of the new process.

The cellophane producer and the machine maker cooperated in the development of the new machine and the cellophane company provided the proper type of cellophane which is essential to the successful operation of the process.

The first model of the machine has been operated successfully at Bucks County Frozen Products, Inc., Doylestown, Pa.

Visitors at the National Frozen Food Industry Exposition in San Francisco, March 19, 20 and 21, were the first to see the machine in operation and were shown a movie of the machine in action.

The development is regarded as a significant advance in the mechanization trend of the frozen food industry. The machine automatically forms cellophane bags, fills the bags with frozen products, exhausts most of the air from them and heat seals the bags all in one operation. Hands do not touch the food at any step.

Free-flowing vegetables such as lima beans, diced carrots, peas, combinations of carrots and peas, cut corn, succotash and mixed products can be successfully packaged by the process. They may be frozen first and then packaged in the "Transwrap" machines, or wrapped fresh and then as the final step in the process frozen within their cellophane bags.

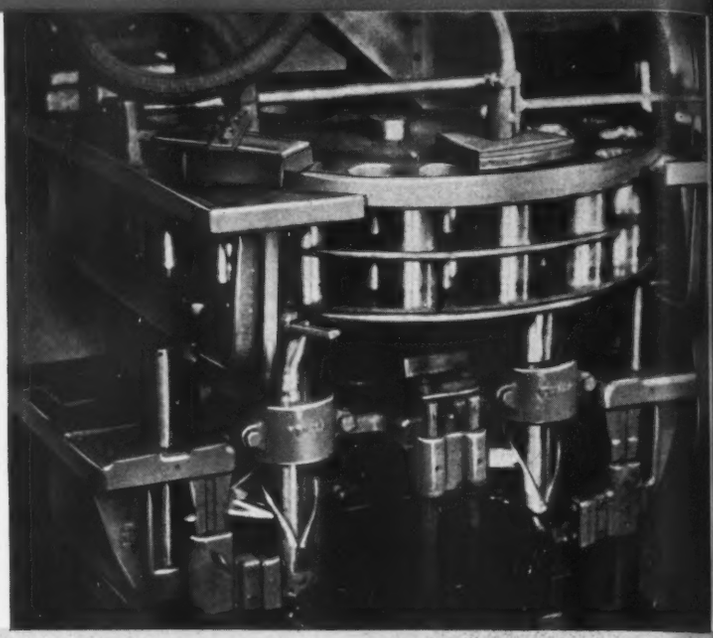
An outstanding advantage of the new process is its adaptability to a wide variety of package types. The basic unit usually is the single-wall, double-wall or laminated-film bag. Printed double-wall or laminated bags are suitable for the retail trade as finished units without further wrapping. The single-wall bag may be used with such conventional containers as the window carton or tray or blind carton, if desired.

Retailing in the cellophane bag alone is said to be

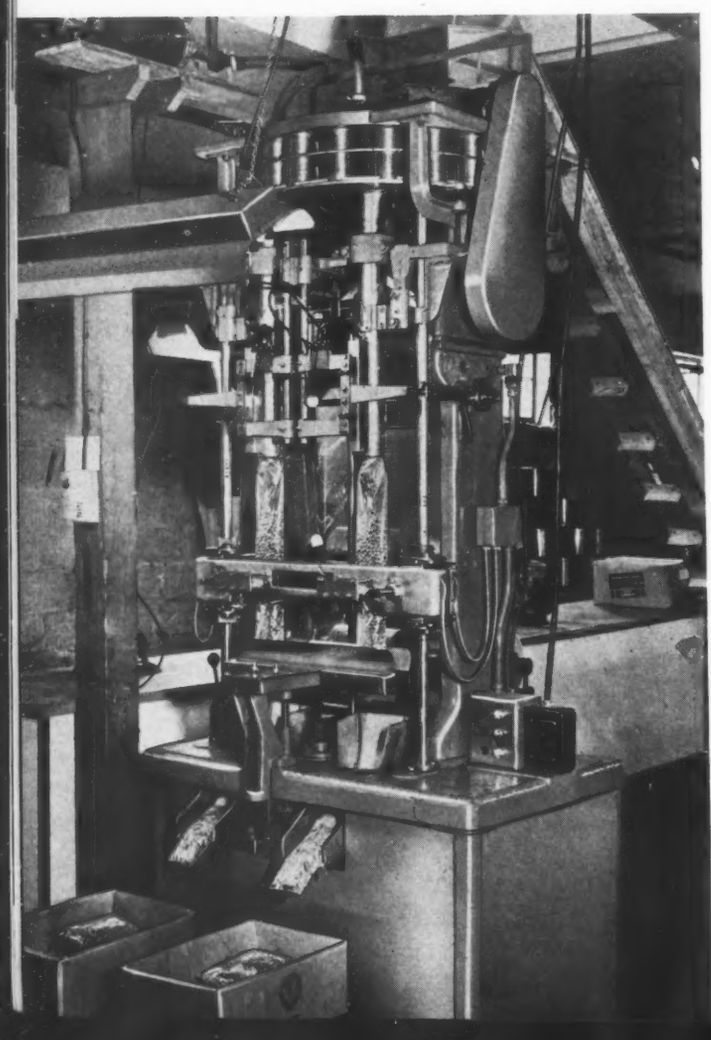
New development permits frozen foods to be marketed in these various ways: bag in window carton or tray, bag in closed carton, or—if double-wall bag is used—as a bag alone. In latter case, printed cellophane also is used, obviating need for stapled-on label. PHOTO, STOKES & SMITH.

Step-by-step story of continuous machine operation

In the pilot operation at Bucks County Frozen Food Products, cellophane is fed from four rolls mounted at the back of the machine. Two rolls feed each of the two package lines to form double-wall bags. An electric eye attachment permits use of printed cellophane; if plain film is used, labels may be affixed mechanically.



This is the critical point at which the webs of cellophane are brought together to form tubes around the two cylinders, as shown at bottom of photo, below the rotary filling head. This operation is continuous. A side seal is made at this point and a cross seal is made at a point below to close off one bag length.



Over-all view of machine operating in plant of Bucks County Frozen Products, making, filling and discharging heat-sealed bags of peas and carrots for freezing. PHOTO, STOKES & SMITH.

practical and this is the most economical unit to produce. It affords adequate protection, it is claimed, and utmost visibility. Distribution tests are said to have shown satisfactory performance of these automatically packed bags.

Use of a tray or window carton retains a substantial part of the visibility advantages besides giving extra rigidity to the package. With trays or cartons, single-wall instead of double-wall bags may be used.

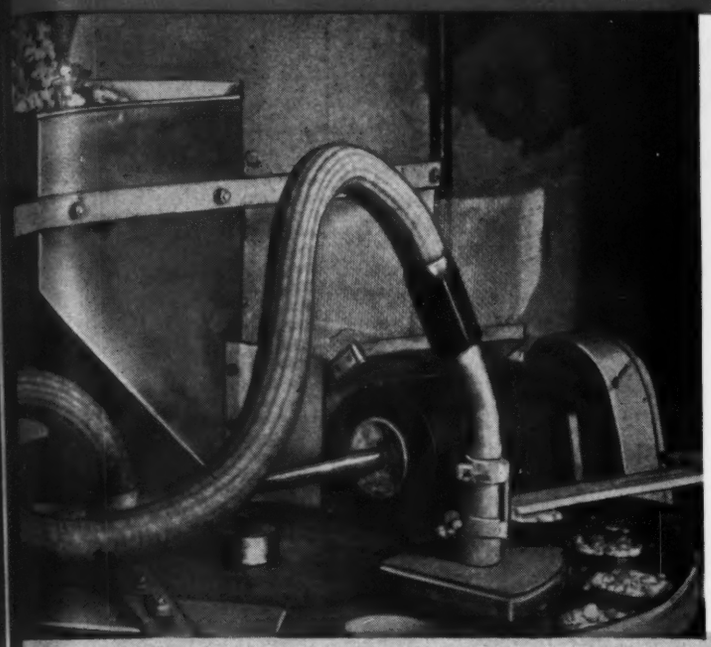
Bucks County Frozen Products, Inc., has successfully used four types of packages: a bag in a closed box, a bag in a window carton, a bag with a stapled-on label and a printed bag.

The new machine embodies modern features of mass production methods. Vegetables are fed into the hopper at the top of the machine. Finished cellophane bags containing the correct amount of product flow from the machine at high rates, in some cases well above 40 a minute.

Each machine incorporates two fully automatic, synchronized production lines turning out two finished bags at a time.

Cellophane is provided from standard rolls of stock

making cellophane bags and filling with frozen food.



This is a close-up view of the filling operation. The foods to be frozen (in this case peas and carrots) are fed into the hopper at upper left and pour into a central reservoir, from whence they are transferred to the rotary filling cups by suction through the unusual flexible tube, which moves in turn over each cup opening.

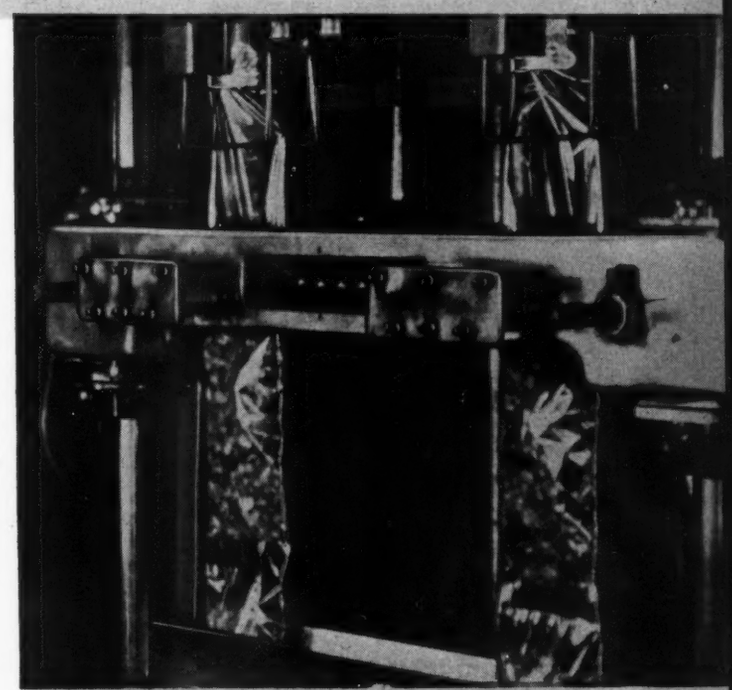
At this point 12 oz. of product from cups in the rotating filling head have been discharged into each of the cellophane tubes through the cylinder around which the tube was formed. As a draw-bar pulls down the cellophane tube, meshed dies make a single heat seal, closing top of one bag and bottom of the one following.

size. An electric eye attachment permits the use of printed cellophane, or if plain film is used, brand labels may be affixed mechanically. The rolls are mounted on the machine, one on each side, to feed each of the two packaging lines where a single-wall bag is used, or two on each side when use of the machine for a double-wall package is desired.

Each side of the machine is provided with its own set of adjustable measuring cups mounted in a rotating filler head. On each side one cup at a time is passed over the tubes through which the product is discharged into the cellophane bags. As the draw-bar pulls down the cellophane tube, the meshed dies make a single seal, closing the top of one bag and the bottom of the one following.

Accurately measured portions of product—12 oz. in the conventional package—pour into the bag as the bar progresses in its stroke to the bottom of its cycle. At the extreme lower limit of each stroke, a final operation shears the transverse seal at its center, freeing the filled bag from the line. As the finished package drops from the delivery end of the line, the draw-bar travels upward again to repeat the cycle and the package which has just been completed is ejected from the machine through a chute which passes it on to a conveyor.

CREDITS: *Machine, adapted from Model BB Transwrap, by Stokes & Smith Co., Philadelphia. Cellophane by E. I. du Pont de Nemours & Co., Inc., Wilmington.*



This is final stage. Heat seal is being made above the two filled sections of the tubes and the sections above the bar are ready to receive a new charge of product. As tubes move down, they are cut off above and below the sealed-in product and the package is then complete. PHOTOS, DU PONT.

DESIGN

POCKET RADIO IN A BOX

Design of this set-up paperboard box for the new 11-oz. "Belmont Boulevard" pocket radio made by Belmont Radio Corp., Chicago., is as modern as the product itself. The silhouette of a city skyline forms the sole decorative motif on the front panel, with the trade and product name appearing in an upward slanting square above. The package makes not only an attractive display setting, but an attractive gift unit for this personal five-tube radio that measures about 6 by 3 in., can be carried in a coat pocket or purse and has a connecting ear piece, enabling the user to hear programs without disturbing people who are close by. The box has a slanting inner platform, die cut to hold the radio and the connecting ear piece. Covered with flocked paper, the box is done in two different color schemes—green with silver for the silver trimmed radio and red with gold for the radio with gold trim.

Credit: *Box, Atlas Box Makers, Inc., Chicago.*

PUDDING IN WAX

Protective packaging has been achieved in a novel manner for "Cock 'n Bull" plum pudding, distributed by the Spice Island Co., San Francisco. Materials for the package are waxed paper, pudding cloth and wax coating. The pudding is first placed in waxed paper, then wrapped in a large square of pudding cloth gathered at the top to give the appearance of a bag. The entire package is given nine coatings of paraffin wax. Paper labels are applied to the hot wax and coated during the over-all coating process. A ribbon is applied to the top and the waxed unit is placed in a set-up box. The wax provides a decorative ivory-finish coating. Directions on the label instruct the user to heat the pudding in boiling water in its package. This melts the wax. The cloth and waxed paper are removed and the pudding is ready.

Credits: *Consultant designer, Al Rogers, Los Angeles. Label, Hopkins Press, Los Angeles.*

HISTORIES

VARIETY SHOW

Triple wrap for the new "Tiffany Three" multiple package of candies is the latest impulse package to be marketed by National Candy Co., St. Louis. Individual candies are wrapped in printed cellophane, enclosed in duplex paper bags with glassine for the inner ply and the three separate bags are placed in a paperboard boat, cellophane overwrapped. Coloring of the bag for "Boston Blackies" licorice creams is black, gray, red and white. For the "Coffee Toffee" a cup and saucer form the central theme. The rum caramels, "Ron Rio," feature a rum jug.

Credits: ***Wraps for "Boston Blackies" and "Ron Rio," Shellmar Products Corp., Mt. Vernon, Ohio. Wrap for "Coffee Toffee," The Dobeckmun Co., Cleveland. Bag for "Coffee Toffee," printed and fabricated by Arkell & Smiths, Canajoharie, N. Y. Bags for "Boston Blackies" and "Ron Rio" printed by Shellmar Products Corp. and fabricated by Benj. C. Betner Co., Devon, Pa. Overwrap, Du Pont cellophane. Paperboard tray, Gereke-Allen Carton Co., St. Louis. Design, Lillian Louden, St. Louis.***

ACETATE-PHENOLIC PACKAGE

Pro-phy-lac-tic Brush Co. is presenting its Jewelite "Invigorator" hair brush in a new transparent package giving complete visibility to the product. The deep hood enables the product to be displayed to advantage from all sides. The package is unusual in this field in that it combines the use of two different plastic materials. The dome-shaped cover is drawn of transparent acetate sheet while the base is molded of phenolic. Problem in combining the two plastics was to obtain a tight fit for the base and cover. Plastic material is used most economically since the base is molded in the form of an outer rim into which a foil laminated paperboard platform is fitted. The embossed foil imparts a rich background for the brush. The company and trade name are molded into base with color wiped in.

Credit: ***Plastic container, Prolon Plastics, division of Pro-phy-lac-tic Brush Co., Florence, Mass.***

New fudge mix takes its place beside the now well-established Oz ice cream mix packages in the Homix family. Container is a fibre can with metal ends and friction top. Front panel shows product. Oz characters are on reverse side of label.

JUVENILE APPEAL

Never underestimate the power of a child! Research backing new Homix labels indicates 90.4% of children influence parents' buying

The increasing influence of children on the purchasing of packaged products used in the home through comic strip and radio advertising is pointing out to a number of manufacturers the advantages of package designs with child appeal.

An outstanding example of the use of market research in determining the feasibility of beaming food packages to the juvenile market is the procedure followed by Homix Products Corp. in the adoption of the Wizard of Oz theme for its successful Oz ice cream mixes—and now a new product called "Oz—a wiz of a fudge mix" to be on the market soon.

The new package, which takes its place in the Homix Oz family, has on the reverse side of its label three characters from the book, "The Wizard of Oz"—the Tin Woodman, the Scarecrow and the Cowardly Lion—drawn by Keith Ward, creator of Elsie the Cow.

When Homix originally introduced the ice cream mixes, they were called "Tis," a name that had the virtue of brevity but very little significance or appeal for advertising promotions. Through the company's advertising agency, Roy S. Durstine, Inc., the suggestion was made that since ice cream was a product close to the heart of every boy and girl, a theme should be selected for the packages to capture youthful fancies.

To find out if such a package promotion were feasible, Homix sent out mail questionnaires to a cross-section of children. On the basis of tabulated answers from 1,569 children (average age 12 years, 42.2% boys and 57.8% girls), it was discovered that 81.4% said their parents bought cereals which they asked for and 90.4%

Insert is actual sample of New Oz Fudge Mix label (with second blue recipe strip trimmed off at right). Reproduction is by ultra-fine-screen process. LABELS COURTESY LORD-BALTIMORE PRESS.

OZ

READY-MIX FOR

FUDGE

JUST ADD WATER

COCOA, POWDERED WHOLE MILK, SUGAR,
SALT, AND VANILLIN—14 OUNCES
MADE FOR HOMIX PRODUCTS, INC., NEW YORK, NEW YORK

HOT FUDGE SAUCE: Follow the same directions for fudge (on other side of package), using 7 tablespoons water instead of 4. Store in covered jar in refrigerator. Heat before serving. Makes about 1⅛ cups.

FUDGE SYRUP FOR MILK: Follow directions for fudge, using ⅔ cup water instead of 4 tablespoons. Store in covered jar in refrigerator. Makes about 1¾ cups. Stir 2 tablespoons syrup in each glass of milk.

WHEN PREPARING FUDGE, THIS PACKAGE WILL MAKE ONE FULL POUND

OZ

A WIZ OF A FUDGE FROSTING

said their parents purchased other foods they told them they liked.

Based on the 1940 census, Homix estimated that approximately 5,600,000 families had children between the ages of 7 and 13 and that if only half of the families were influenced to purchase just a few of the packages designed with juvenile appeal, the total volume would be tremendous.

Also, if children were influential in the purchasing of cereals and other foods, it was logical to assume that they would reflect this same influence on the purchase of packaged ice cream mixes because ice cream definitely would have greater appeal to children than cereals.

Because of the phenomenal readership of "The Wizard of Oz" through many years, the Oz characters were selected as the possible theme for the packages and trade name. But before Homix bought the name "Oz" and rights to the book for use in advertising and promotion of food products, another study was made to determine the readability and the pronunciation of the name Oz and the association of the character to the name and the recognition of these characters in relation to the story of the Wizard of Oz.

This survey covered a cross-section cosmopolitan group of varied incomes, sexes and ages—2,940 individuals. Respondents were shown a trademark "Oz" and asked the question, "How would you pronounce this name?" Those interviewed were also shown illustrations of the Tin Woodman, the Scarecrow and the Cowardly Lion with the question, "Do you recognize these characters?"

Results showed that 87.6% pronounced the name correctly—90.7% women, 86.8% men, 85.5% children. Nearly 65% were able to identify the characters correctly, with children leading the adults: 81% children, 50% men, 52% women.

On the basis of these findings the "Tis" packages were changed to "Oz," incorporating the Oz characters. Their successful acceptance now puts them on the fudge mix labels. Family identity is continued on the new package by the use of the red oval containing the trade name.

The front of the label illustrates two mouth-watering pieces of fudge in full color, with the quick direction "Just add water," a feature of the new product which the company says is the first complete fudge or frosting mix ever marketed that does not require the addition of butter or other shortening. Ingredients are printed in readable type below the product illustration. On the other side of the label is a repetition of the Oz oval below which are the Oz characters in full color promoting the product as a fudge cake frosting. An interesting detail is the placement of the recipes to read sideways when the metal-end, friction-top fibre container is held horizontally. This placement will be advantageous in such outlets, perhaps, as Grand Union's Food-O-Mat, the automatic store where cans are stocked sidewise and roll into position before the shopper (MODERN PACKAGING, Dec., 1946, p. 134).

Oz characters lend themselves to mechanical display. Latest one is this miniature figure of the Tin Woodman encased in acrylic sheet who starts beating the minute he is plugged in.

The labels are faithful color reproductions, printed by the newest method of lithography, using finely textured press plates to permit extremely fine screen (MODERN PACKAGING, Dec., 1945, p. 93).

The use of the Oz characters on the packages permits a close tie-in with animated drawings in all promotional materials such as magazine and newspaper advertising, animated displays, etc. The trademark of the red Oz oval and the Tin Woodman is used on shipping containers, shipping labels and all printed matter used by the company such as invoices, letterheads, envelopes, etc.

The package character of the Tin Woodman is also reproduced in very realistic mechanical displays. The latest type of display, which travels from store to store in a sturdy wooden carrying case, shows a miniature figure of the Woodman wrought of nickel and silver actually beating up a bowl of ice-cream mix. His table is a giant reproduction of the package on which is his mixing bowl and a miniature package of the ice cream mix. The display has a wood base and is encased in acrylic sheet. All the dealer has to do is plug it in, start the motor and the Woodman turns the egg beater. The unit is designed for use in windows or on top of shelves in supermarkets where the product is stocked.

CREDIT: *Label printing, Fidel-I-Tone process, Lord Baltimore Press, Baltimore, Md. Fibre container, American Can Co., New York. Mechanical display, Ted Tinker, New York. Oz trademark design, Lucian Bernhard, New York.*

POCKET 40's

New kind of cigarette package being introduced by Old Golds

Convenience for the user and protection for the product are the features of this shiny, hinged paper box that holds a two-pack supply.

No bulge, no bulk; the flat package can be slipped very easily into a man's coat pocket.

Aiming to provide twice as many cigarettes in one package and thus offer greater protection and convenience for the two-packs-a-day smoker, P. Lorillard Co., Inc., is introducing an Old Gold "Pocket Forties" package containing 40 cigarettes. According to rumors in the trade, two others of the Big Five cigarette manufacturers are going to follow Lorillard's lead.

Although the merchandising theory appears to be similar to that of the old "flat fifties" package—which was discarded during the war and is not expected to return—the package is a brand new idea in the cigarette field.

Made of paperboard, it provides the rigidity and convenience of the conventional hinged set-up paperboard box, with a much simpler construction. The pack is approximately the same size as a "double-decker" cigarette case—as wide as two cigarettes placed end to end, as long as 10 cigarettes placed side by side and as deep as one cigarette placed on top of another.

In merchandising the "Pocket Forties," P. Lorillard is emphasizing the "no bulge, no bulk, no breakage" features of the pack, as well as the advantage of being able to carry a double supply of cigarettes conveniently. The "case" is suited for outside and inside pockets of men's coats and hip pockets of men's trousers, as well as women's pocketbooks. The box serves the same pur-

of tobacco, no mangling of the cigarettes themselves, so that when smoked the cigarette is virtually in the condition in which it left the machine. P. Lorillard feels that "Pocket Forties" will have special appeal to sportsmen and others whose activity makes their cigarettes vulnerable to rough handling.

The box has a chipboard base specially laminated with clay-coated paper lithographed in six colors and varnished on the surface. The many scoring lines demand that the board be long-fibred and have good bending qualities. The printed single blanks are sent by the box maker to P. Lorillard, where the self-hinged box is formed at high speed on a machine especially built and designed for this purpose by the box maker. A special glue is used to seal the flaps. In setting up the boxes themselves, Lorillard plants are able to conserve valuable storage space and avoid handling costs.

in the script which P. Lorillard is now using in all product packages to lend family unity. The type used in printing "Old Gold," differing from the Old English type employed in the Old Gold twenties pack,* gives a new, modern appearance to the "Pocket Forties" unit, whereas continuance of the Old English, it was felt, would have tended to perpetuate an "antique" atmosphere. Inside the lid of the box, the company name and the slogan, "A Famous Name in Tobacco for Nearly 200 Years," is printed in script.

A single strip of glassine, embossed in a plaid design is placed lengthwise in the box as a liner and folded over the top of the cigarettes at both ends. The cigarettes are packed in two tiers, each with 20 cigarettes placed lengthwise in two groups and separated by a paper-

* See "Something New in Old Gold Packaging," MODERN PACKAGING, Sept. 1946, p. 138.

Five boxes of the 40's make a compact carton which holds the usual 200 cigarettes. The boxes are cellophane-wrapped.

Counter cards are used to introduce the new package, which sells for the price of two conventional packs.

An informal, sporty theme has been carried out in the design of the box. The background is a gold-tan tweed weave, simulating men's suiting material. The coloring deepens toward the edges of the top, bottom and sides, where the weave is less evident. Running around the middle of the box, from front to back, is a wide brown band, edged with scarlet "stitching." In the direct center of the front of the box is pictured an old coin, symbolizing old gold. The coin, printed in gold-bronze, blends with the background and the clear brown band. A scarlet shadowing backs the coin. Under the coin, "Old Gold" is printed in large Bodoni type; "cigarettes" appears in small Roman type and

board divider. Slips of bond paper are placed between each tier. At present the packages are being filled by hand; P. Lorillard is developing a special filling machine. A cellophane overwrap completes the package.

A folding carton holds five "Pocket Forties." With a white background and red lettering, the carton employs the same Old English lettering and holds the same number of cigarettes as the 10-pack carton.

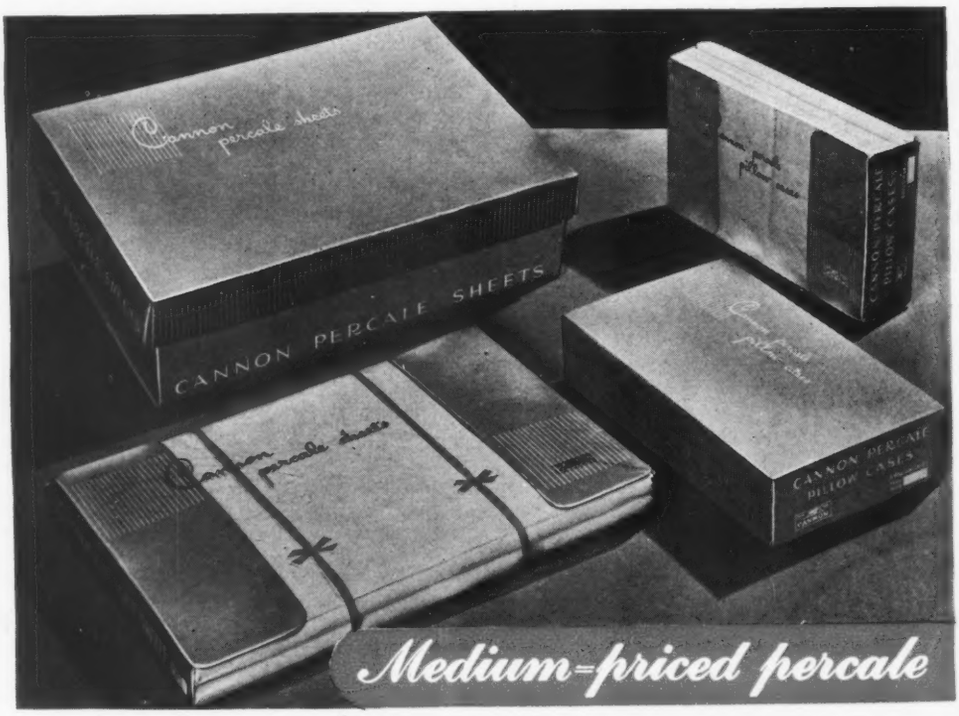
"Forties" sell for twice the price of twenties.

CREDITS: *Box and carton blanks, National Folding Box Co., New Haven, Conn. Machine for setting up box blanks designed and built under supervision of National Folding Box Co. Glassine liners, Riegel Paper Corp., New York.*

CANNON

Popular-priced muslin

All the sheets are cellophane wrapped in pairs, six to the box. Pillow cases are wrapped in half dozens. Muslin sheets are packed in square, two-piece folding cartons that suggest long service. Colors are yellow, green, red.



Medium-priced percale

The medium-priced percale sheets are put in flat rectangular two-piece folding boxes. The cellophane - wrapped pairs are held in place by fold-over cardboard backing and ribbon tied. Cellophane is printed in contrasting color.

Finest quality percale

Packages for the finest quality percale sheets are designed in the most delicate pastel colors. Sheets are wrapped in gold-printed cellophane with the gold forming a band around each end. Ribbon ties add daintiness.

SHOTS OF COLOR

Textile maker hits market with new packages for sheets and pillow cases

dressed in the colors women like, encouraging sales in half-dozen units

Sheets and pillow cases, of course, are purchased almost entirely by women, yet in the past very few textile mills have given serious consideration to packages with really feminine color appeal.

The complete redesign program of Cannon Mills is planned with that aim in mind. Cannon has learned a thing or two about packages women like through its 10 or more years' experience with the successful Cannon towel and sheet gift sets.

"But don't confuse our new sheet packages with our gift sets," said Dorrit Osann, Cannon's package designer, "because our new stock packages are planned as sturdy, year-round shelf and display packages for our staple products."

She indicated, however, that it was Cannon's success in the use of feminine colors for the gift sets (several times All-America Package Competition winners) that led not only to the new color treatment of the new stock packages, but also to the management's firm belief in the attractive package as an aid to sales.

Cannon recognizes the present year as a transition period in merchandising and its family of hundreds of modernized packages for staple as well as specialized lines is planned for the time when store "promotions" will no longer be a lost art and retailers will be looking for every possible way to increase sales.

Emphasis in the new packages is on display value and sales appeal to attract attention on shelves, on counters and in windows.

Another innovation is the adoption of a package unit to promote the retail sale of sheets and pillow cases in half dozens. All the new sheet stock boxes contain three cellophane wrapped packages, each with two sheets to the package. Thus they provide for unit sales in pairs, but with a strong impulse suggestion for the sale of a colorful box containing six sheets. Pillow cases are all cellophane wrapped in half dozens and boxed.

The packages were also designed so that the sheets would be clearly visible as sheets and meet store buyers' requirements for white merchandise in a sheet department, an important factor for interior and window display promotions. Whiteness of the sheets is even strengthened by contrast to the clear, fresh colors selected for the boxes and label bands—blues, greens, clean pinks and grays—colors that are stimulating and pleasing in contrast to the drab navies, browns and hunter greens often used in the past for such types of packages.

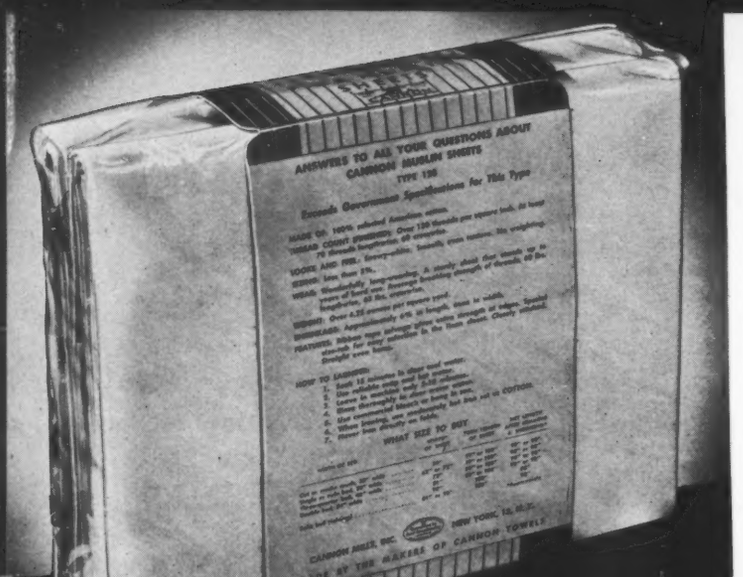
In the packaging program there is also a studied aim toward simplification, yet incorporating the many requirements of Cannon's diversified merchandising plan.

A hinged set-up box for a combination of two sheets and two pillow cases is also designed for the finest percale sheets, similarly wrapped with gold printed cellophane and ribbon tied.

Packages for three grades

Emphasis has been placed on packages for Cannon's three grades of sheets and pillow cases—muslin, percale and finest quality percale. The boxes are graduated in size with the quality, each appropriately suggesting the grade and quality. Muslin sheets, lowest in price, are packed in a sturdy square two-piece folding box that suggests long service, practical wear and every-day utility. The Cannon Fine Muslin brand, for instance, has a background of yellow—a color long associated with Cannon muslin—with stripes and trademark in green and red. The skirt of the box lid is red for contrast in mass display.

The percale sheets, medium priced, are put in a flat, rectangular box. The cellophane wrapped pairs are held in place by a fold-over cardboard backing and ribbon tied for daintiness. The Cannon name is printed on cellophane in contrasting color overlays, giving a rich accent against the color of the sleeve ends


ANSWERS TO ALL YOUR QUESTIONS ABOUT
CANNON MUSLIN SHEETS
TYPE 130
Exceeds Government Specifications for This Type
HOW TO LAUNDER:
WHAT SIZE TO BUY
CANNON MILLS, INC.
NEW YORK, 10, N.Y.
MADE BY THE MAKERS OF CANNON TOWELS

Full buying information is provided on the back of the cellophane wrapped pairs of sheets. For the finest quality percale package, this information is printed on a gold foil insert booklet.

and the snowy whiteness of the sheets beneath the cellophane. A variation of this package is developed in green and blue for Cannon Cavalier percale sheets, a brand which has been well established in certain department stores for many years. An indication of what this package modernization involves may be gained by comparing the old and new Cavalier packages. The new package is one of simplicity and clear, clean color areas with a minimum of identification copy. All informative information has been transferred to the back of the package so that there is no cluttering of front panels. The old-fashioned, four-color figure of the Cavalier has been modernized in a line-drawing. This gives continuity of brand identity started years ago when labels were placed on the merchandise itself rather than on the package and when artists generally used history and mythology as sources for brand names and symbols.

Elegance for finest quality

A package that bespeaks sheer elegance for Cannon's finest quality percale sheets is appropriately the largest. It is designed for appeal to the good taste of the most discriminating shopper, yet employs just enough gold trim on the cellophane wrap to please those who cannot accept for the highest price the beauty of stark simplicity. The long set-up boxes are covered with delicate pastel colored papers—pink, green, lavender, blue—special colors for different brands. Cellophane wrappers are printed in gold lettering and with gold bands at each end. Ribbons tied around the sheets are in colors to match the boxes—gift items for a bride or a stock item for the homemaker who buys the very best in household cottons.

In keeping with the trend toward informative labeling, full buying information is provided on the back of the individually wrapped packages of muslin and percale grades, with the heading, "Answers to All Your Questions about Cannon Muslin (Percale) Sheets." This information, written in more restrained style, is included with the finest quality percale sheets on a gold lacquered aluminum foil insert booklet. This type of information assists the customer to buy and also provides salespeople with concrete facts about selling.

All Cannon Mills' merchandise is sold under the Cannon name in conjunction with various brand names, each of which demands its own package identity. In the new packaging program there appears to be a trend toward simplification of basic package structures to meet these brand and labeling requirements.

Label modernization

A part of the program has been a modernization of all these specialized labels. Old-fashioned symbols of Greek goddesses, gladiators and military themes have been revamped in keeping with modern design trends and in a conscientious attempt to pull these somewhat irrelevant motifs into something more suggestive of the merchandise they represent. Many of these labels were formerly printed in four colors or more. Color treatment of the labels has been greatly strengthened, in many cases involving the elimination of old-fashioned, cluttered four-color labels and replacing them with clear feminine colors harmonizing with the new packages.

The almost general requirement of cellophane wrappings for sheets and pillow cases in Cannon's packaging program is another indication of the need for automatic wrapping equipment in the textile industry.* Today the textile industry not only folds sheets by hand, but wraps them in cellophane by hand, an operation that is slow and costly for mass production. Several equipment manufacturers are working on this problem and in the near future may make available equipment that will automatically wrap sheets without the aid of cardboard backers. The only preparation for such wrapping will be the cardboard label band to hold them together in pairs, since sheets themselves when folded have sufficient rigidity for handling on a wrapping machine.

Cannon's package redesign program is another example of a leading manufacturer recognizing the powerful advertising medium of the package to meet new merchandising trends. The beautiful colors used for this packaging are difficult to visualize without seeing how effectively they may be combined and contrasted in window display and for counter arrangement in the department store. They should go a long way to win prominent display space for the complete line of Cannon products as well as to attract women shoppers quickly to those products.

CREDITS: *Folding boxes, Container Corp. of America, Chicago. Set-up boxes, Old Dominion Box Co., Inc., Charlotte, N. C. Cellophane wraps, Sheilmar Products Corp., Mt. Vernon, Ohio, and Milprint, Inc., Milwaukee, Wisc. Foil inserts, Reynolds Metals Co., Richmond, Va.*

* See "Textiles," MODERN PACKAGING, June, 1946, p. 93.

WINE IN VACUUM

A continuous-thread, rolled-on aluminum cap with special liner gives positive seal, top and side, and may end oxidation and leakage

The wine industry for some years has been divided into two schools of thought on bottle closures: those who feel that the aesthetic appeal of the traditional cork is indispensable and those who feel that something better in the way of a threaded cap—more convenient for the user—should be developed.

A major packaging innovation in the wine industry, therefore, is Roma Wine Co.'s adoption of a new type of rolled-on aluminum screw cap, to be used with a conventional CT bottle finish.

Not only is the new CTRO (Continuous Thread, Rolled On) cap more easily applied and removed, but after exhaustive tests Roma engineers are convinced that it will give superior protection to their wines. There even appears to be some basis for Roma's publicity claim that it produces a "vacuum-packed" wine.

Wine is bottled at a temperature slightly higher than room temperature. Thus, after a tight cap is applied and the bottle is placed in storage, a vacuum is created. This prevents the oxidation, or "breathing," which over long-term storage may impair the flavor of the wine.

With the traditional cork, breathing may occur if the cork dries out and shrinks; that's why dealers and connoisseurs are careful to store corked wines on their side—to keep the cork wet. Conventional preformed threaded closures, whether metal or plastic, make a seal only on the top lip of the bottle; they cannot be depended upon, according to Roma engineers, to maintain a perfect hermetic seal.

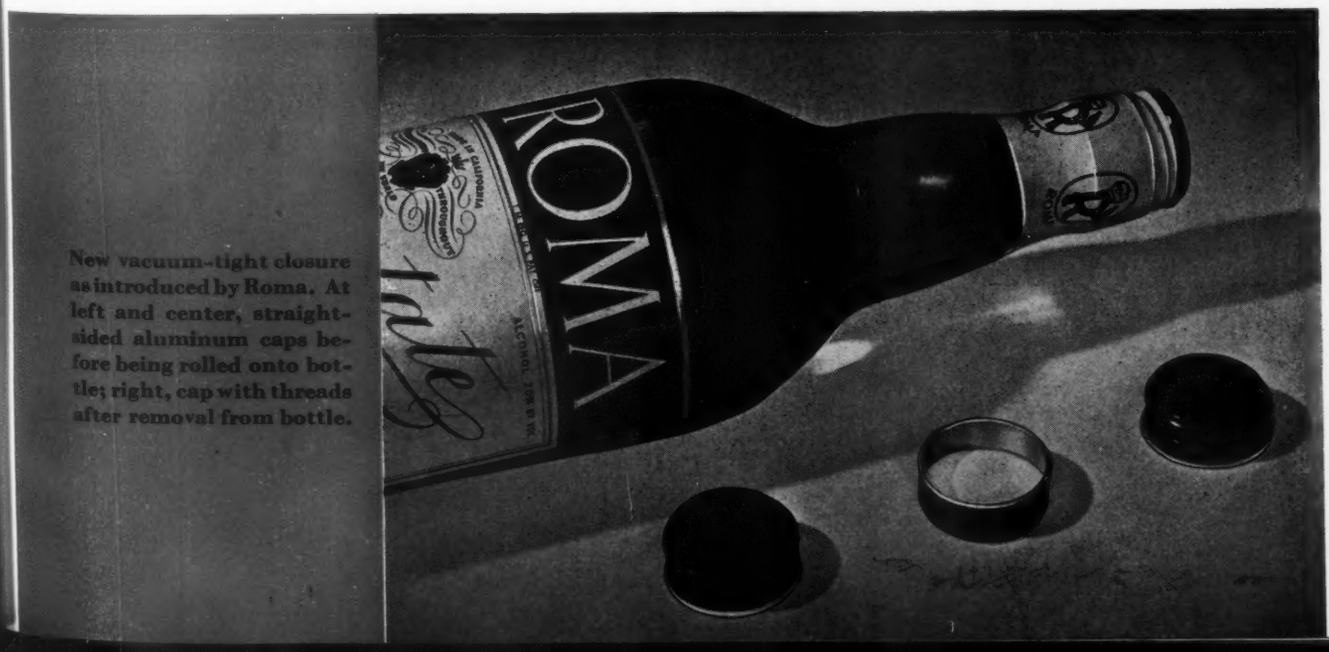
The new aluminum closure, although similar in principle to types used for several years in the liquor industry, has been especially developed for wine bottles and this marks its first use. This cap as received is smooth sided—no threads. It is placed on the bottle and the malleable aluminum rolled directly to the threads of the bottle finish by a special machine, under 300 lbs. pressure. A good impression is made in the cap liner, which has cork backing, pulp and a vinyl film facing. A firm seal is made not only on the lip of the bottle but also continuously around the side of the bottle as well.

As used by Roma, the cap has a rolled lip and an enamel outside coating and probably would not be distinguishable by the average consumer from the conventional prethreaded tinplate cap. Despite its firm grip on the bottle threads, it is said that it will unscrew readily when gripped in thumb and forefinger. Roma uses a cellulose shrink-type side sealing band to insure tamperproofness.

Retailers will welcome the new closure since it will no longer be necessary to store wines on their sides and losses due to leakage and oxidation will be ended, the Roma company believes.

In its extensive tests preliminary to adopting the CTRO closure, Roma's quality control department found the cap to be "completely free of objectionable odors or flavor and impervious to rust." Engineers subjected the cap to extreme conditions to test its ability to hold the wine in vacuum. Cases were shipped with six bottles upside down and six upright by air freight and by railway express across the country and back. Several weeks later readings were made and they showed more than 10 in. of vacuum in the bottles. Since then, carloads have been shipped across the country. In no instance, it is said, has there been a failure to maintain a positive vacuum.

CREDIT: *Closure developed and manufactured by the Aluminum Seal Co., New Kensington, Pa.*



New vacuum-tight closure as introduced by Roma. At left and center, straight-sided aluminum caps before being rolled onto bottle; right, cap with threads after removal from bottle.

1 Latest addition to the redesigned family of packages for X-Acto Crescent Products Co. (see MODERN PACKAGING, Aug., 1946, p. 107) is this container for the No. 77 X-Acto woodcarving set. The tools fit into recesses in the wood base and are covered by an acetate hood. The folding carton duplicates other packages in the line with its black background brightened by yellow, red and white.

2 Excellent consumer and market acceptance of quick frozen pre-cooked items in general and Young Tom Broadbreast Turkey a la creole in particular led College Inn to package this product and offer it in selected market areas. The 12-oz. carton is overwrapped with cellophane printed with the familiar orange, yellow and black College Inn label. Twelve packages are included to the case to conform to food distributor preferences. Carton, Container Corp. of America, Chicago. Printed cellophane, Milprint, Inc., Milwaukee, Wisc. Shipping carton, International Paper Co., Container Division, New York.

3 Tussy's new Contraband make-up is being packaged in individual gold foil laminated cartons. Simplicity keynotes the design. With product and trade name providing the sole decoration, the packages present a clean and modern appearance. Box, International Folding Paper Box Co., Inc., North Bergen, N. J.

4 Dark blue embossed paper provides a rich cover paper for a satin lined, hinged set-up box adopted for packaging Coro pearls. The embossed design is a geometric pattern. The winged-horse Coro trademark stamped in the satin lining of the lid gives trademark identity. Box, Herald Paper Box Co., New York. Cover paper, Holyoke Coated & Printed Paper Co., Inc., New York.

5 A combination shipping and display carton was selected for a new model Westinghouse Quicklag breaker, to be used in place of fuse plugs. A paperboard collar placed over the breaker handle protects it during shipment. Screws for connecting circuit wires are enclosed in an envelope within the container. Coloring is blue and orange. Carton, Rex Box Co., Pittsburgh.

6 For greater consumer convenience, Dermetics now packs its 4 and 8 oz. bottles of "Mist, Charm of the Redwoods" deodorant with an empty dispenser and army-

PACKAGING PAGEANT

type dropper. Cartons are laminated foil with a misty overprinted effect. Designer, J. Gordon Lippincott & Co., New York. Cartons, Warner Bros. Co., Bridgeport, Conn. Dispenser bottle, T. C. Wheaton Co., Millville, N. J.

7 A six-color lithographed and varnished tight wrap is used on this 2¾-lb. package of Occident Cake Flour, recently introduced by the Russell-Miller Milling Co., Minneapolis. The cake illustration is used on both front and back panels. Photo-sequences on back panel illustrate and explain step-by-step instructions. Side panels carry additional cake recipes. Wrap, Bureau of Engraving, Inc., Minneapolis.

8 O'Sullivan's heels are being packaged in colorful new boxes. All panels carry the same design, prominently displaying company trade mark and slogan, "America's No. 1 Heel," so no matter how the boxes are stacked copy is clearly visible. A key-color arrangement is utilized for quick and easy selection of the heel desired by the repairman. The bold modern color and type treatment make for high readability for counter, window and shelf displays. Cartons, Maryland Box Co., Baltimore, Md.

9 Following the success of its polystyrene foam Christmas snowball package, Lentheric adapts the same material to a sparkling Easter egg. The snowy white container, fabricated from sheet in two pieces, holds three miniature flacons of perfume and is topped with a pink camelia and soft plush bow.

10 Birtcher Bros. & Dorr, Inc., is packaging fresh-frozen California orange juice in a colorfully lithographed can under the name of Glen-Dora, the town where it is packed. Special interior coating for citrus juices was developed for lining the can. Colors are blue and white with orange for the fruit. Can, American Can Co., New York.

11 Unusual feature of this new NBC coffee cake carton is its die-cut window in the shape of a coffee cup, suggesting product use and giving it visibility. Cake is wrapped in glassine paper. Flap openings remind the user to "always ask for NBC Bread." The package makes use of standard NBC red, blue and yellow colors.

6

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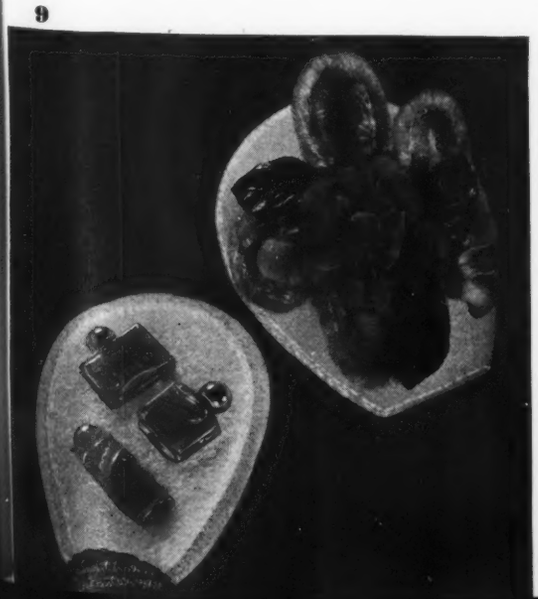

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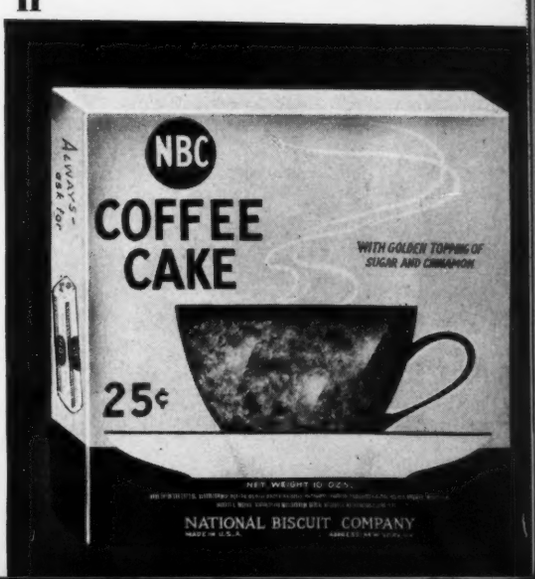
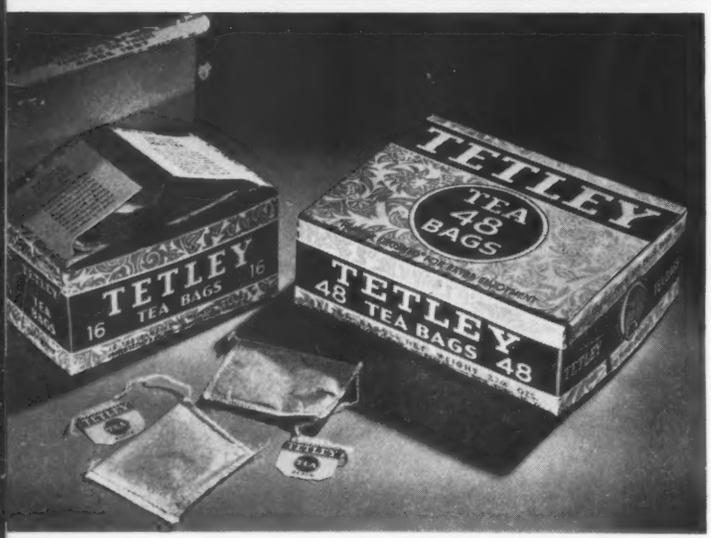


MODERN PACKAGING P

12

12 Festival of the Lanterns which traditionally welcomes spring in Chinese ritual is used as the theme for the new "Spring Fever" Chen Yu packaged set of nail lacquer and lipstick. The design is a kodachrome reproduction of Chinese figurines on a landscaped stage.



13

13 Tetley Tea Co., Inc., has redesigned its tea-bag packages for better identity and sales appeal. Directions for brewing good tea from tea bags have been placed right on the carton flap where the housewife cannot miss them. The famous Tetley elephant head trademark on both ends of the package identifies it with all other Tetley tea products. The bottom of the package, formerly blank, now carries a sales message. Color scheme is blue, white and silver. Cartons, Fort Orange Paper Co., Castleton On Hudson, N. Y.

14

14 Tek's new de luxe tooth brush is appearing in a transparent acetate container with a molded bright red cap which fits tightly into the tube. The trade name is stamped on the acetate in gold and an inner paper label printed in blue, red, silver and white completes the package. Acetate, Celanese Plastic Corp. Lumarith. Tube, Extruded Plastics, Inc., Norwalk, Conn. Cap, Plastic Mfgrs., Inc., Stamford, Conn.

15 Among combination-set packages returning to the market is Barbara Gould's new Pageant make-up in a gay set-up box known as "The Pageant Trio." A bright streamer carries the company and trade name encircling a striped pole and topped with a fancy-dress figure. Design, Lourelle Guild, New York. Lithography, Addison Lithographing Co., Rochester, N. Y.

16 Cans, cartons and jars for Alta coffees and teas, made by Alexander-Balart Co., have a new family package design. Smartly and simply lettered, the packages for the two products differ in coloring—brown for coffee, and black and red for tea. Package promotion included a hat designed by a San Francisco milliner and patterned after the Alta coffee can. Labels, Louis Roesch, San Francisco.

16

PAGEANT

17 Bottles of vanilla extract made by Holsum Products, Milwaukee, are being merchandised in a newly designed paper carton featuring the heraldic Holsum crest and an orchid motif. Selection of the orchid as a symbol for the product was made because vanilla extract derives its flavor from the vanilla bean, which in the flowering stage is an orchid. Carton, Milprint, Inc., Milwaukee. Bottles, Hazel-Atlas Glass Co., Wheeling, W. Va. Caps, Trio Metal Cap Co., Chicago.

17

18 Double-shelled, threaded metal caps with beveled edges are the interesting feature of these custom-designed closures made exclusively for these new Max Factor packages. The closures are made to simulate the most expensive plastic caps with mechanical and cost advantages of metal. (See "Closure Appeal," MODERN PACKAGING, Oct., 1945, p. 114.) Caps, Crown Cork & Specialty Corp., Decatur, Ill.

18

19 The familiar sports themes used for Sportsman toiletries for men have been applied to packages for Sportsman Champion razor blades introduced by John Hudson Moore, Inc. They come in sets of 10, individually wrapped and packaged in a flat set-up box. Notches in front of the box base provide ease in dispensing the blades. Box, Imperial Paper Box Corp., Brooklyn.

20 A die-cut folding carton that looks like an attractively bound book when closed on the druggist's shelf and opens into a display carton has been adopted by The B. F. Goodrich Co. for its Sojourn fountain syringe. The package for the company's Pullman fountain syringe is similarly designed. Carton, Reynolds Metals Co.

21 The Dutch scene on the face of the new consumer package for Zy-Vo Dutch Crust for pies and pastries is the first of a series of Dutch scenes which will be used by the Zy-Vo Corp. in entering the consumer field. The carton is done in four-color process and varnished. Background is blue. Design, Edward Hutchinson, Philadelphia. Cartons, The New Haven Pulp & Board Co., New Haven, Conn.

19

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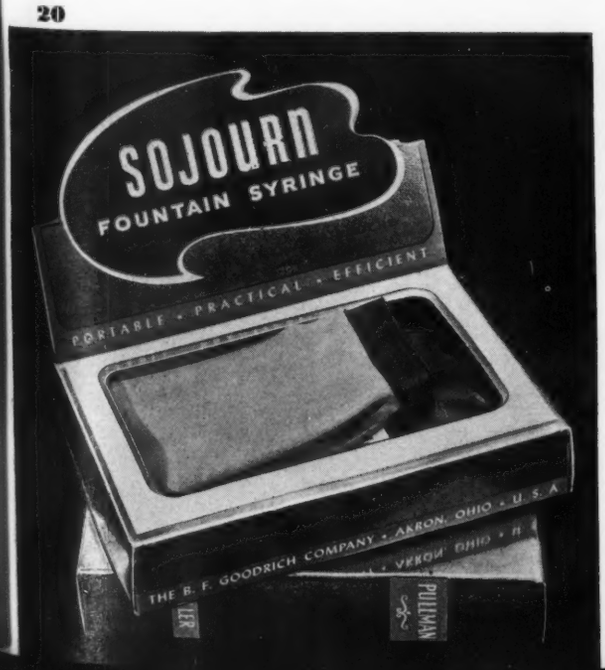

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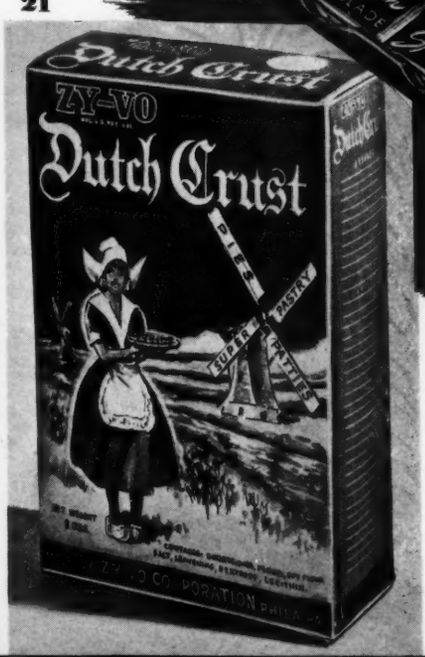
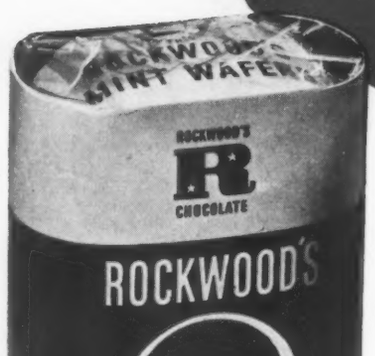


OVAL PACK FOR WAFERS

Rockwood adopts new-shape package made of glassine-laminated paperboard, aimed at impulse sales in food stores



Rockwood's new oval pack has been adopted for the company's mint wafers and milk chocolate rum wafers. The mint-wafer package is green, while brown is used for the rum wafers. A cellophane overwrap which covers the die-cut window in the paperboard package gives clear visibility to the confectionery product inside.

The package itself is in one piece, die-cut and scored so that when bent and glued it forms two tubular compartments or sections for the product. End flaps tuck in and wedge against wafers, thus holding them securely in place.

Growing interest of the confectionery industry in the food store as an outlet for the impulse sale of sweets* is indicated by the increasing number of new impulse packages appearing for these markets.

Rockwood & Co. has begun national distribution of a sturdy new package with plenty of visibility appeal and unusual construction for its chocolate mint and chocolate rum wafers.

In a way, the package is suggestive of a small egg carton in construction. Its oval shape is formed of a single sheet of glassine-laminated paperboard, die-cut in such a manner that when the two sides are bent and glued together they form two vertical tube-like compartments, side by side, to hold the wafers. End flaps are designed so that when folded and wedged in against the wafers, the confections are held securely in place. The bottom flap is spot glued, while the top flap is perforated for easy opening. On the face of the package is a die-cut window and when the completed package is overwrapped with cellophane the product is clearly visible to the shopper.

The packages are printed in one color—green for the chocolate mint wafers and brown for the milk chocolate rum wafers. Lettering is in reverse printing and the design theme follows the scheme of the new Rockwood family design, featuring the trademark "R" and sans serif lettering of company and product names. On the back of the package the type is arranged so that the printing registers across the folds which form the inner partitions in the package.

The finished package is oval, convenient to hold in the hand—making it a completely effective unit for the present requirements of "sight and touch" merchandising in the self-service store.

The glassine lamination is on the inside of the sheet and is incorporated at a cost to Rockwood of many thousands of dollars annually to keep grease from seeping through the board and discoloring the package and also to prevent the possibility of untreated board affecting the flavor of the chocolate.

This new package is the third which Rockwood has used since its chocolate wafers were first introduced in 1933 in a heat-sealed printed cellophane bag. The original package was continued until the beginning of the war, when cellophane was restricted. At that time the company adopted a wartime package—a paperboard carton which was designed with what might be described as a "gabled" tuck-in top flap. This opaque package, of course, allowed no opportunity for visibility of the product, but the wafers were pictured in color on the package.

In planning its new package, Rockwood wanted one that would allow contents to be seen by the shopper and also something more sturdy than a cellophane bag to stand the rough handling in self-service merchandising. Several leading designers were employed to plan the package. The final result is a combination of all their ideas and the technical skills of Rockwood's own engineering department in working out the details of a practical package suitable for mass production lines.

Eventually the new package will be produced on completely automatic equipment. It is expected that this equipment will be in operation some time within a year. At present the operation is semi-automatic. The die-cut blanks are positioned on a spot gluing machine by an operator who places them on a platform over an oval wooden core the same size as the oval window in the package. This assures correct positioning of the blank for the placing of the glue. The same operator then takes the spot glued blank, tucks in the bottom flaps and places it over a mandrel. The mandrel is in two sections and, when operated with a foot pedal, acts like a vice and applies sufficient pressure to press together the two glued sides that form the inner partition. There are several mandrels on a wheel, so that as soon as the pedal is pushed and the blank is pressed together and removed, another mandrel is in front of the operator ready for the next blank. The preformed blanks are taken to a filling station where two operators use specially designed scoops to lift up the correct quantity of wafers to fill each section of the package. The partially filled packages then go to a weighing station where additional wafers are added to meet specified weight. Top flaps are wedged in and the packages are placed on a conveyor, from which they are delivered to a cellophane-wrapping machine.

CREDITS: *Die-cut blanks, Continental Folding Paper Box Co., Inc., Ridgefield, N. J. Cellophane, Du Pont, Wilmington, Del. Wrapping machine, Package Machinery Co., Springfield, Mass.*

First consumer package for Rockwood's wafers was a printed cellophane bag. When cellophane was restricted during the war, a folding carton with tuck-in flap was adopted. This gave no visibility to product, so picture was used.

* See "Candy," MODERN PACKAGING, Sept., 1946, p. 104.

Keeping his eyes on the superimposed images of two cylinders, seen on mirror in the viewer, operator adjusts plate on color cylinder, in front, until it registers with black plate in rear. Optical head is movable.

PHOTOS, H. H. HEINRICH, INC.

FOOLPROOF REGISTRATION

That's the claim for a new optical device that determines in advance just how multi-color plates are going to print

Ever since the beginning of multi-color printing, men have been scheming and making devices to insure perfect registration of color plates. Some of these have been more or less successful; none has been foolproof. As a rule, valuable time continues to be lost in make-ready and adjustment after the plates are on the press.

Now a manufacturer of printing equipment has brought out a simple optical device which he claims is foolproof and capable of cutting out hours of idle press time in the average printing or converting plant. Those who have used it say that it really works. This is good news not only to the package converter but to all package users, for it means better-printed multi-color packages and labels, quicker and cheaper perhaps.

The device, aptly named "Opti-Chek," is adapted in principle from an Army range finder. Images of two plates which are to be brought into register are observed superimposed on a mirror. As he watches the mirror through a viewer, the operator adjusts the position of one plate until its image is exactly registered with the second. The two plates are then in perfect register.

At present the device is applicable only to cylindrical printing plates, but a modification is being worked out for flat-bed presses. The principle is the same. In its present form the checker is a separate piece of equipment in which the cylinders are mounted for registration of plates. Later the manufacturer expects to have a portable device to be mounted right on the press.

The separate machine has its advantages, however, in that while a press is still running on one job, a pressman can be setting up the next job, having the cylinders all ready to roll without any further adjustment of

plates. No proofs or measurements need be taken.

In mounting a set of color plates on cylinders, the first move is to mount the key plates, usually the black. This can be accomplished with the aid of the machine without the use of any measuring device.

On the view plates there are mounted cross-lines; longitudinally across the machine is mounted a graduated steel scale which corresponds to the cross-lines. In mounting the key plates, the operator puts a pointer at 0, looks into the viewer and mounts the first plate on the cylinder in direct relation to the cross-lines. Then, if the spacing between plates is, for example, 6 in., he moves the machine head over until the pointer locates on 6 in., looks through the viewer and mounts the second plate in relation to the cross-lines, continuing this process right across the cylinder.

Now if there are plates to be mounted around the cylinder—that is to say, two around—the cylinder must be rotated 180 deg. so that the second set of plates will be directly opposite the first set. This can be done precisely by using the gear at the extreme right of the machine, which acts as a dividing head. Each tooth is marked so that it is possible to divide the cylinder circumferentially by one, two, three, four, five or six. Following these steps carefully, it is possible to mount any number of plates on a cylinder in direct relation of spacing to each other in accordance with the layout.

Then the key cylinder, with the first set of plates mounted, is moved from the front to the rear cradle of the machine and the cylinder for the second color is placed in the front position. The images of plates on both cylinders are then seen on the mirror through the viewer. While keeping his eyes on the mirror, the operator then simply adjusts the plate on the second cylinder until its image is precisely superimposed on the image of the first cylinder.

Cylinder No. 2 is thereupon ready to run, with the assurance that it will be in perfect register. It is removed from the machine and in its place is put Cylinder No. 3, with the third color. This is adjusted to register with the key plate in exactly the same manner. Four, five, six or as many colors as desired can be registered if the black or key plate is kept in the same position.

By the use of this machine, it is claimed, the time required for registering all the plates on a large multi-color job has been reduced from hours, in some cases, to minutes. A job is made ready while the preceding one is running. Waste of paper, ink, cellophane or other material during tedious make-ready; waiting time of press and manpower are reduced. The machine can be operated by pressman or helper without special training.

The manufacturers state that the machine is made in various widths to accommodate cylinders used on any standard multi-color press.

Among the packaging suppliers now using the new device are Milprint, Inc., Crown-Zellerbach Corp., Dixie Wax Paper Co. and Tension Envelope Co. Shellmar Corp. also has one of the machines, which it is using to check rotogravure rollers prior to engraving.

One effect of the new machine may be to extend the use of rubber printing plates in package work. Rubber plates have advantages in printing on foil, cellophane and over-all designs on paper, but they have always been difficult to mount in register. The current model, it is claimed, makes rubber plates easy to register.

The rotary machine as well as the new flat-bed model will be exhibited by the manufacturer at the Packaging Exposition. The flat-bed device is expected to be particularly useful in the printing of folding carton board. It may be used to locate the key printing plate to the cutting-and-creasing form; the procedure then is to start printing with the big form, take a proof of the first color and use it to register the second color. Any number of additional colors may be positioned in the same way. The flat-bed checker also will be useful in color printing of labels and envelopes—in fact, wherever printing is done with more than one color.

CREDIT: *"Opti-Chek" machine designed and manufactured by H. H. Heinrich, Inc., New York.*

A PERISCOPE VIEW

This is what the eye sees as it looks through the viewer. In the photo above, the two plates are badly out of register. After adjustment has been made, plates are in perfect register as shown below.

MP Display Gallery

Nestle's Hairlac display consists of two pieces—a die-cut folding carton and a separate riser piece. The dealer sets up the display merely by pulling up the back piece, which has tabs at the bottom and slides up on two vertical slits cut into the back panel. The back piece is in full color. The display carton carries out the same blue, pink, black and white coloring used for the newly designed individual cartons. Display and cartons, The Lord Baltimore Press, Baltimore, Md.

Two new Canadian displays (above and left) are those for Lucien Lelong perfume and for Ayerst drugs. Both are of paperboard lithographed in full color and feature a large center piece with separate side pieces. Central theme of the Lucien Lelong display is a glamorous face; shadow lines indicate permeation of the air by the fragrance. Side pieces are replicas of the perfume boxes. A bright, healthy youngster features the cod-liver oil drug display. Columns which form the side pieces promote the product in its various forms—liquid, drops and tablets. Displays, Planned Sales, Ltd., Toronto, Canada.

Display card for Cortley's French Ice Cream features a pocket for holding their "New Tricks with Ice Cream" folder and an actual ice cream carton. An appetizing dish of ice cream with strawberries and whipped cream, reproduced in full color by letterpress, forms the background for the display. Circle to the left advises to "Try Something New!" and calls attention to the recipe folder. Container, Sealright Co., Inc., Fulton, N. Y. Display printing, Brown Printing Co., Syracuse, N. Y.

This eye-catching display developed by R. M. Hollingshead Corp., Camden, N. J., for Whiz mirror and glass finish is of paperboard die-cut and scored to hold an actual pint-sized container of the product. The can rests on the scored bottom piece and a die-cut flap fits over the screw cap of the container. Background of the display is black. Circle and arrows are bright red, with lettering in reverse white. Square patch in upper right corner is blue. Blank space for price is filled in by retailer.

Sheaffer pens are being merchandised in gift-item (left) and working-unit (below) displays combining use of colored transparent photographic film, blue mirror, fluorescent lighting, glass and wood. Photograph shows through opening etched in mirror. Gift display is supplied with films appropriate for various occasions and are interchangeable. Illumination is from behind. Working unit holds 32 pens and tray section is also lighted. Design, Henry Berry; displays, C. D. Baird & Co.; photographs, Pohlman Studios, all of Milwaukee.

▲ Exact replica of the Golden Arrow perfume bottle has been adopted by John Frederics for a counter display. Made of acetate, base is covered with mirror-like top which is snapped into place on the beaded edge of the base. The mirrored top was accomplished by a new process of silvering acrylic. Topping the display is a stopper combining frosted acetate and gold-leaf-covered wood. Gold leaf stamping is used for signature lettering. Measuring 9 1/2 in. in diameter, both inner area and top surface may be utilized. Display, Plastic Artisans, Inc., White Plains, N. Y. Acetate, Monsanto Vuepak. Acrylic, Rohm & Haas Plexiglas.

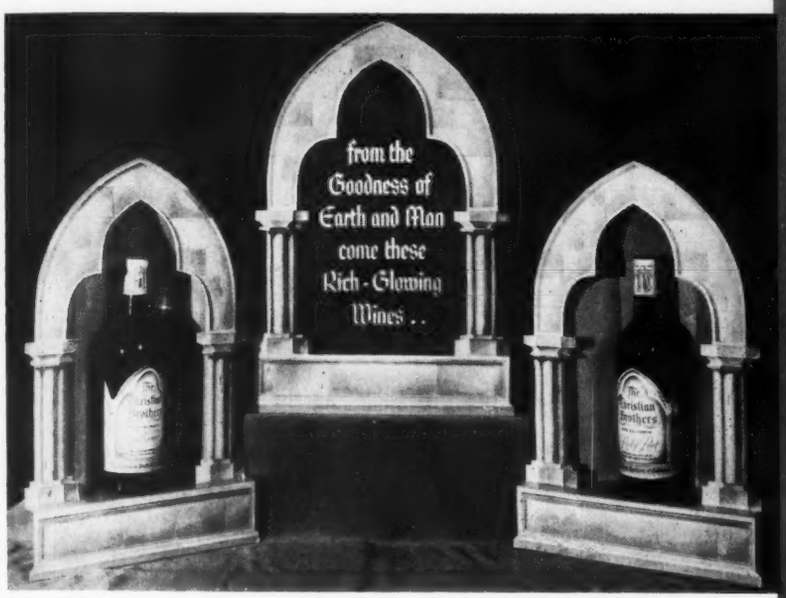
▲ New Grippit paper cement package has been fashioned after cosmetic packaging to make it stand out among other items on the hardware counter. Back piece features figure of a woman and slogan "Sticking Pretty." Line drawings around side panels show typical uses of product. Design, Floren & Nutting, Boston. Tubes, Wheeling Stamping Co., Wheeling, W. Va. Boxes, Worcester Paper Box Corp., Medford, Mass.

Prospective customers for Dr. Lyon's tooth powder are given an opportunity to check on appearance of their teeth right at point of sale by this mirror counter display with pretty-girl appeal. Measurements are 12 3/4 in. high by 11 in. wide. Paperboard panels carry sell copy; product name and slogan appear on wood base, which holds full-sized can of powder. Display, Leopold Sonn ▼ & Bro., Inc., New York.

Plastic, metal and fluorescent lighting form this personalized display for Metroloy shears. The acrylic scroll is mounted on a metal base enclosing lighting unit. Rayon flock spray coating gives base a velvet-like finish. Distributor's name and sell copy are engraved in two colors. Light conducted from base by plastic casts band of light on shears. Display, Lakeside Plastics & Engraving Co., Duluth, Minn. Acrylic, Rohm & Haas Plexiglas. Rayon flock, Claremont Waste Mfg. Co., Claremont, ▼ N. H.

MP Display Gallery

The trademark label design for Christian Bros. wine bottles was adapted for their new three-piece paperboard display. Modified Gothic design is lithographed in gray to resemble stone windows of a cathedral. Actual bottles are placed in recesses of two end pieces. Center panel has gold Gothic lettering. Design, Lucian Bernhard Studio, New York. Lithography, Rode & Brand, New York.



Full-color "before" and "after" figures feature Johnson & Johnson's back plaster display. Reproduction of the package in its actual colors—black, red and white—appears across the center. Display, Kindred, MacLean & Co., Inc., Long Island City, N. Y.

Reproduction of microscope and globe in center of Purepac display symbolizes the science of chemistry and medicine and the fact that the company's drug products originate from all parts of the world. Family group and close-up of druggist's shelf reflect completeness of Purepac line. Display, Hussey-Woodward, Inc., New York.

ONE-DIP
FOUNTAIN FEED Writing PENS
Continuous writing with specially constructed points!
An Admiration Product
Dip 2 or 3 Times when new

One-Dip pens are being promoted through this new combination packet-display card. Made of scored paperboard simulating leather, it is sealed with cellulose tape. Die-cut openings through which 12 pens are inserted when display is open add a decorative note to packet when closed. Display, Wm. Fitzhugh & Co., Brooklyn, N. Y.

PHOTO AND TIP-ON COURTESY SHELLMAR PRODUCTS CORP.

New acetate-surfaced labels as used, front and back, on Carstairs' "White Seal" whisky and, front only, on Gallagher & Burton's "White Label" whisky.

LAMINATED LABELS

Rotogravure-printed on the reverse side of an acetate film surface, they are now being used on bottlers' regular labelers

Liquors, still in their severely plain wartime bottles while cost increases make them more and more a luxury item, depend entirely upon their labeling to convey an impression—so far as packaging is concerned—of quality worth the price. It is important to the distiller to have a label with maximum eye appeal and one that will stand up functionally through all the hazards of shipping and handling.

Such a label appears to have been found by several leading distillers in a new acetate-and-paper lamination which is said to be the first of its type to overcome certain difficulties in application. It is now used by Schenley, Calvert, Seagram and Gallagher & Burton.

Basically the label is of the same construction as the high-gloss, acetate-surfaced box wraps familiar to the cosmetic field. Acetate film (0.00088 gauge) is printed on the reverse side and laminated to paper. Not only does the film surface have a gloss and clarity unobtainable with varnish, but the printing is completely protected against marring or rubbing off. It is waterproof and stainproof and can be wiped with a damp cloth.

Using such a material as a covering for set-up boxes where the adhesion was paper to paper was no great problem, but adhering the paper-backed acetate labels to glass bottles was something else again.

For some years before the war the producer of these labels went through a series of experiments in this direction. None was completely successful because of the lack of proper adhesives and proper means of application. During the war the use of cellulose acetate film for labeling purposes was prohibited; but the experiments continued. Finally proper adhesives were developed and ways were found of adapting existing bottle-labeling machinery to the job.

The great difficulty was in the drying of the adhesive in bottle applications. The semi-moistureproof acetate surface prevented the moisture in the glue from passing out through the label as it normally would; it trapped the moisture and this caused curling, distortion and poor adhesion. This problem has finally been reduced, the label producers say, by use of a special paper construction with a special adhesive containing so little moisture that the amount trapped is slight.

According to P. J. Martersteck, director of purchases for Joseph E. Seagram & Sons, Inc., Louisville, Ky., his primary reason for adopting the labels was to prevent scuffing. The need for scuff-resistance was intensified due to the inferior grade of paper currently available for the inner packing of cartons. In prewar years Seagram's could obtain water-finish kraft liners and partitions which did not scuff the labels. The current inner packing, consisting of jute and other substitutes, is fairly rough and in some cases bottles have reached the dealer with labels scuffed so badly that they were illegible. For a long time Mr. Martersteck had been experimenting with varnish coatings to protect the labels, but these were not entirely satisfactory. When it occurred to him that a lamination of transparent film might be the answer, he contacted his label supplier to find that his idea had already been perfected and that the labels were just then becoming available.

The new labels appear to have solved the scuffing problem completely. Furthermore, they have better appearance through greater brilliance and intensity of color. Comments from the field indicate, according to Seagram's, that the glossy label has unusual consumer appeal. Bartenders like it because it makes a good appearance on the bar, virtually immune from soiling by liquor running down the side of the bottle after pouring.

Mr. Martersteck points out certain limitations of the new labels to be weighed against their advantages. The glossy surface is not in harmony with some Seagram labels which strive for an antique appearance. The cost is somewhat higher than that of a plain paper label, although less than the cost of elaborately embossed and varnished labels. "We believe," says Mr. Martersteck, "that some added cost is justified" in view of superior performance.

None of the distillers who have used the label have reported any difficulty in applying it with conventional labelers as long as the methods and special adhesive recommended by the supplier are used.

The new labels are being used on several of Seagram's brands; on Carstairs' "White Seal" whisky as both front and back labels on fifths, pints and half-pints; on Carstairs' "White Seal" gin and on Gallagher & Burton whisky. They will soon appear on "Three Feathers."

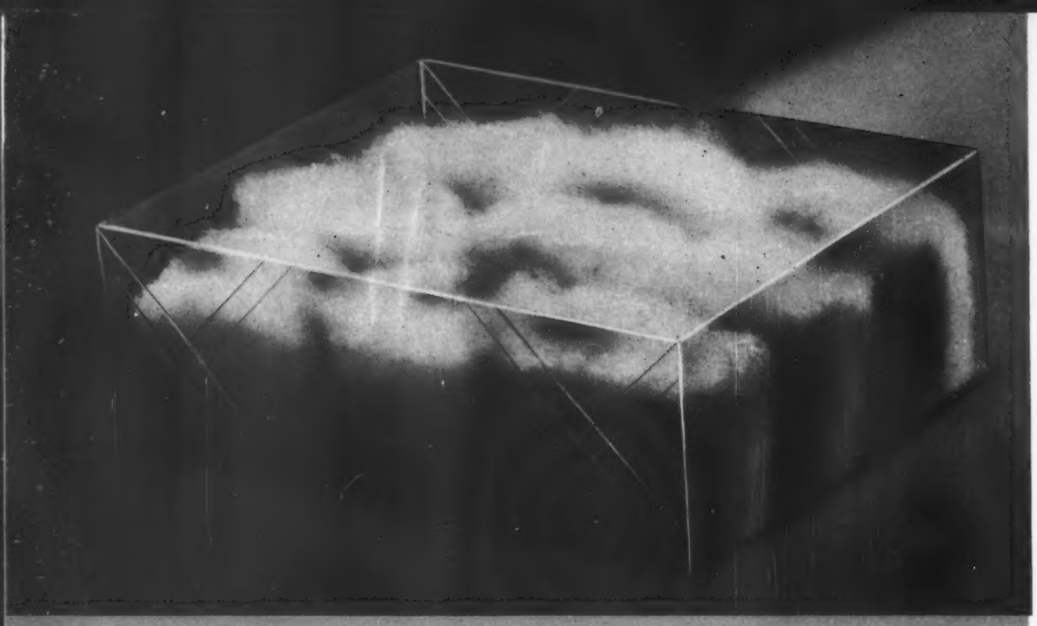
Printing of the acetate in reverse is done with a special rotogravure process by which the darkest color is laid down first and backed up by succeeding colors, the last of which is white. This gives the effect of close-register letterpress work and colors are said to be much more intense and opaque than can usually be obtained in printing on transparent film. The printing is done on specially developed presses capable of printing up to seven colors on the film and laminating it to the paper backing in one "pass" through the press.

Actual sample of new Carstairs label. Surface is 0.00088-gauge cellulose acetate film, rotogravure printed on reverse side. Special paper and adhesive minimize problem of adherence.

The labels are produced in continuous web form. Subsequently the press rolls are rewound accurately and cut into sheets from which the individual labels are cut or die-cut, depending upon shape.

Supply of these labels is still restricted due to the continuing shortage of both cellulose acetate film and laminating paper. When the supply situation improves, the producer expects to see the labels widely used in other fields besides distilling. A shampoo bottle, subject to wetting and staining by the product, is an obvious application. Proctor & Gamble's "Shasta" shampoo and R. N. Hollingshead's "Glim" will shortly appear with the new label. Many other cosmetics and toiletries may benefit by its use. In the wine field it will make available beautiful halftone reproductions of grapes, leaves and full-color photographs; in this field, its cleanliness and scuff-resistance will be particularly advantageous, since wine generally has a longer shelf life than most bottled products. Other likely applications are for beer, soft drinks and flavoring extracts.

CREDITS: *"Shell-Pli" laminated labels developed and manufactured by Shellmar Products Corp., Mt. Vernon, Ohio. Acetate film supplied by Celanese Plastic Corp., New York. Special adhesive, No. 435, by National Adhesives, New York.*



Close-up of finished telescope box shows the "X" lines formed by corner seams which give the box its name. One line of the "X" is on lid, one on the base.

PLASTIC 'X-BOX'

Simple change in design of blank produces a transparent sheet container quicker and easier to make, more uniform, smarter

Improvements in the design and manufacture of transparent plastic sheet containers, subject of several recent articles in MODERN PACKAGING, continue to be made.

What is believed to be a new and basic design for transparent boxes that will be easier and quicker to manufacture than conventional types and which incorporates a number of important improvements has been developed and is now being recommended by the demonstration laboratory of one of the large manufacturers of sheet plastic.

Known informally as the "X-Box" design, since the diagonal seams of the top and bottom cross to form that letter, the box can be easily produced by any manufacturer with only a basic change in the blank from which the box is shaped. Instead of a conventional heavy cross-pattern, the new blank is a rectangle from which a "V" has been punched at each end of the longer sides. Fabrication then follows the same general steps as in boxes produced from a conventional blank; however, the following advantages in manufacture are achieved.

1. It is easier to position the blank for the last two folds; the blank has a tendency to be self-positioning.
2. The new blank enables a somewhat greater production rate, particularly in the heavier gauges, since less hand work is required.
3. The new box has tighter corners; a small, inconspicuous slit is left at each corner instead of a round and apparent hole.
4. The new box has better appearance and cleaner corners, since the angular seams on sides give smarter, more dynamic lines to its construction.
5. It is easier to make precise steel rule dies for cutting blanks since the new die is composed entirely of straight lines without tricky curves at the corners for creasing.
6. No special equipment is required for fabrication.
7. No additional material is required with the new design to form boxes of sizes comparable to those made with previous designs. The same over-all sized blank is used in both cases.

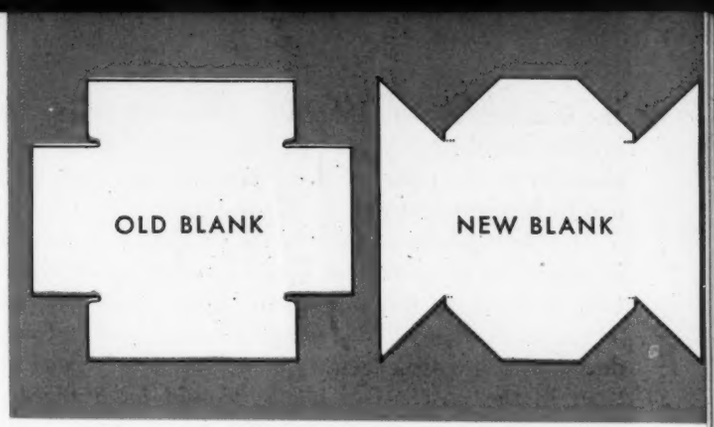
In the fabrication of the new box, experimentation in the manufacturer's laboratory has revealed that a slight change in the bar creaser—wherein the creasing bar is reversed so that the beveled edge is away from the operator—is necessary for utmost speed and precision in production. This slight change in the creaser facilitates manufacturing operations since the first two folds down the longer sides must be made precisely along the line of the small slits at each corner. This calls, of course, for the exact positioning of the spacing shoulder so that the crease will always fall at that point. However, once such an adjustment has been made, production can then proceed with considerable rapidity.

The maximum amount of time and effort saved in the production of transparent boxes of this new design is, however, achieved during the making of the last two folds since no hand work is necessary to protect the sides of the box which have already been formed.

In conventional transparent box manufacture it has always been necessary for the creaser operator to hold

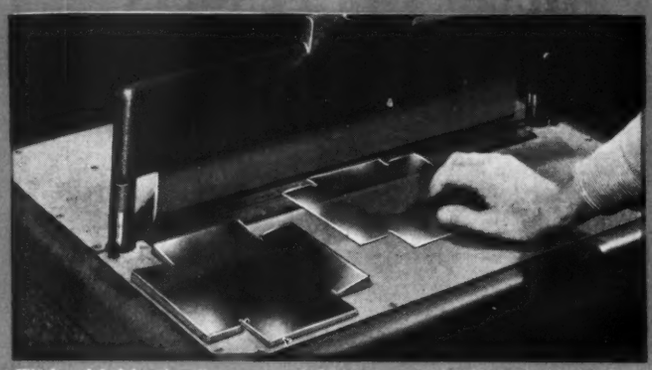
back the sides already formed to prevent further creasing of those sides at the ends. With the new "X-Box" blank, the ends to be shaped need only be placed in position against the spacing shoulder and the crease made. The V-shaped cut in the blank almost self-positions the blank and eliminates unwanted extra creasing of the sides because it partially guides the creasing bar into position as the bar descends.

The diagonal cut of the ears and sides gives a slightly longer strip to cement than the vertical ears of the standard box design. Cementing, however, can be readily accomplished by clamping a metal plate across



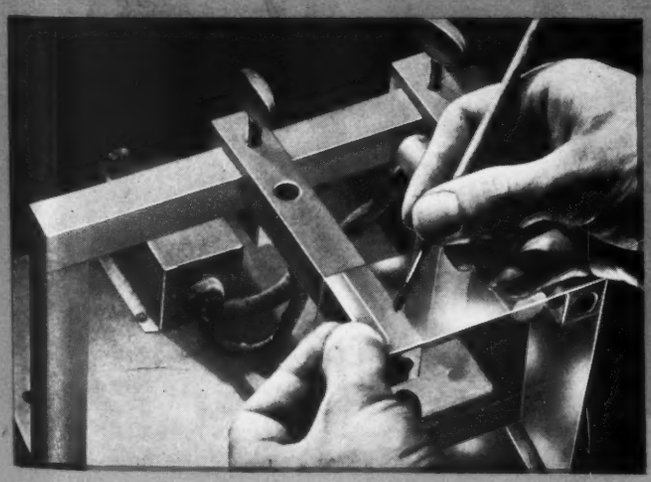
Difference between shape of conventional transparent box blank and that for "X-Box" is shown here. New dies do not require precise shaping; are easier to make, less expensive.

OLD METHOD



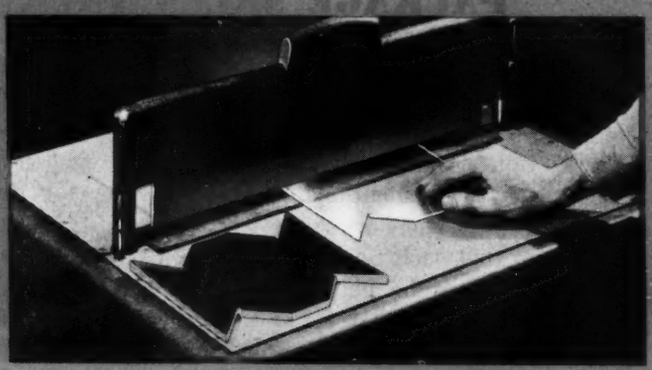
With old blank, first two folds are made like this on bar creaser. Some leeway in positioning of blank is possible.

With old blank, two hands are needed to position for 3rd and 4th folds; sides must be held back as shown in photo.

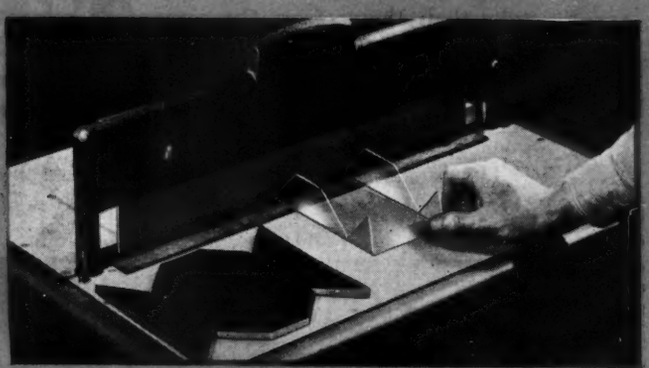


With old box, seams are cemented like this, one side at a time. The ears must be positioned and pushed by hand.

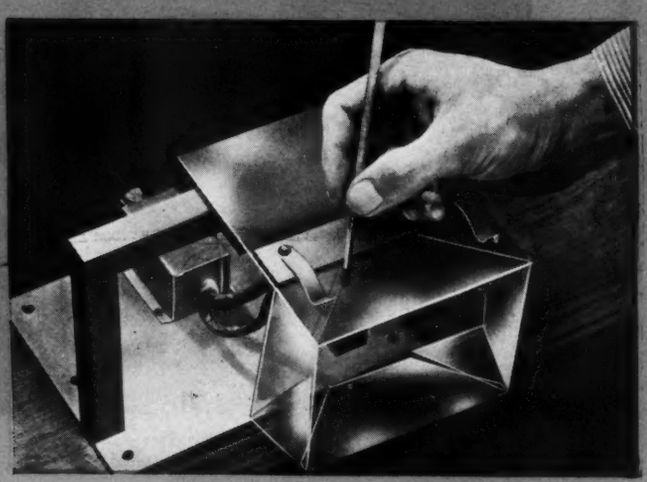
NEW METHOD



With new blank, bar creaser iron is reversed, beveled edge to back. It must hit little corner cuts of the blank precisely.



With new blank, V-shaped cut formed by ears and sides of box almost automatically place blank in position for folds.



New box may be rapidly cemented on two corners at once by the use of a clamping and holding jig like this one.

the mandrel, by equipping the plate with fingers for holding the flaps in place and by adding a small metal shoulder to the plate against which the ears and sides can be brought into perfect alignment.

The boxes produced by this new design are said to be invariably of far greater uniformity as to size and shape than transparent boxes produced by previous designs. Therefore, a snugly fitting top may be designed and produced with greater certainty of a consistently good fit than in the past. Top blanks should have slightly greater inside dimensions than the bottom ones.

In announcing this new transparent box design and suggesting it to manufacturers who desire to utilize its advantages in their packaging, the company stated that their patent people had not made an infringement search of the box and blank as shown in this particular design of blank and box. A short novelty search was made and no references were disclosed which had claims reading on the blank and box in question. However, the company makes it clear that it is making no representations or warranties as to infringement.

CREDIT: *"X-Box" designed and developed by Kodapak Demonstration Laboratory, Cellulose Products Division, Eastman Kodak Co., Rochester, N. Y.*

PACKAGE SALES TALK BY WILLIE THE PENGUIN

Each pack of Kools now shows on the back of the package a cartoon illustration of "Willie the Penguin" in some amusing situation accompanied by a different selling point for these mentholated cigarettes written in verse. There are some 30 different illustrations so that each time the shopper buys a package of Kools he gets a different picture and a different sales story, and a wide variety when he buys a whole carton. Themes for each of the different verses are based on reasons Kool users have given to Brown & Williamson for smoking these cigarettes. The package panels take their theme from the company's current advertising campaign, accenting frequent small space newspaper advertisements that duplicate the animated drawings and verses on the packages.

The idea for the packages was inspired by the advertisements designed with a replica of the package floating in white space to make it stand out against other reading matter. The same idea is carried out in car cards which reproduce three of the packages illustrating the penguin and carrying the verse on each. Large-size illustrations of the package are used for other display material. The theme is also utilized for spot radio and minute announcements.

The company has found that the use of this package idea is one that gives a variety of interest at economical cost since the total number of designs can be printed at once on the wrapper sheet. No attempt is made to see that ten different designs go into each carton, but with a series of 30 coming off the lines continually there is little chance of more than a few duplications in each carton and the average shopper who buys a pack at a time usually gets a different one with each purchase.

Transparent polystyrene top gives instant ▶ identification of size to collets when stored on shelves either in the stockroom or the tool crib.

◀ Proper sized paperboard sleeve makes it possible to use a single sized plastic container for all four different sizes of collets. Photo shows a collet partially removed from its container.

IT'S A COLLET

No label needed on container of molded plastic—the transparent top tells the whole story

Whether to employ a blind type of package and rely upon adequate labeling to identify the contents or to utilize transparency in such a manner that the packaged item "speaks for itself" is often a question.

Often a close study of various related factors—such as the relative degree of product protection needed, special merchandising considerations and whether the package is to be used as a permanent container for the item—is helpful in reaching a final decision in such cases. This approach is typical of that made by South Bend Lathe Works in deciding upon a unique type of plastic package for its line of collets, which are cylindrical metal parts used to hold stock in machining.

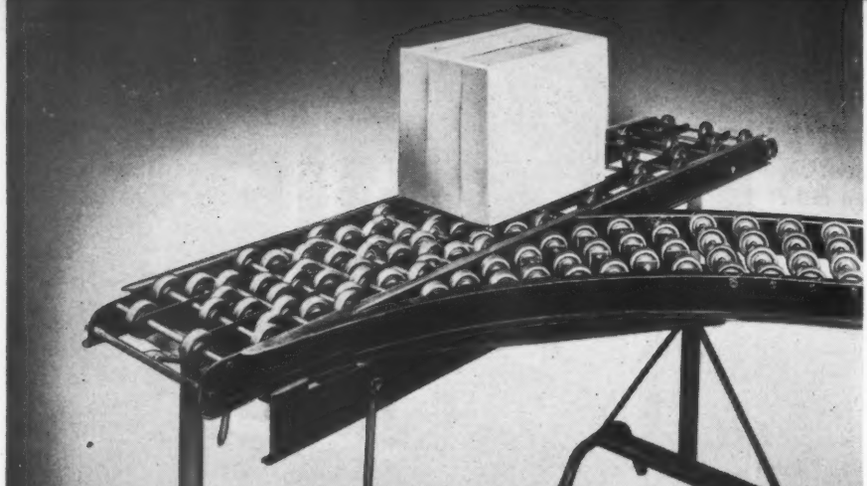
South Bend Lathe required a package which would provide adequate protection for the collets and would also facilitate their handling and display by dealers. The collets are made in four sizes and several different styles to meet a wide range of machining requirements. The firm's previous practice had been to package the collets in labeled paperboard cartons. These boxes were made just large enough to hold a single collet, requiring the company to stock four sizes at all times.

After surveying all aspects of the problem, South Bend Lathe decided upon a completely new approach and a radically different type of package. Briefly it consists of a two-piece plastic container, the base being square in cross-section except that corners are tapered off, giving edges an attractive ribbed design. The base, molded of general purpose phenolic material, has a cylindrical inner surface with four vertical ribs and is capped by a clear polystyrene threaded top.

The packages are placed on their sides on the dealer's shelves in order that the size and style of the collets may be clearly observed through the transparent plastic tops. The flat sides of the packages prevent them from rolling and facilitate orderly stacking. The container is said to be virtually moistureproof.

Naturally cost was a consideration. Had containers of different size been required for each size of collet, mold costs might have proved prohibitive. But this problem was neatly solved by using the same container for all four sizes and employing paperboard sleeves to take up extra space around the smaller sizes.

CREDITS: *Phenolic base of container, General Electric Co., Ft. Wayne, Ind. Polystyrene caps, Plastics Division, General American Transportation Corp., Chicago.*



WHEEL-CONVEYOR SPUR CURVE

Rapids-Standard Co., Inc., Grand Rapids, Mich., has developed a wheel-conveyor spur curve for use in conjunction with its rapid wheel conveyor lines. This spur curve makes possible the directing of materials either straight through to one destination or around the spur curve to a line running at a right angle to the main line. This simplifies the sorting of packages or cases containing different commodities and routes them to a designated storage area or to loading docks for shipment.

By simply "throwing the switch," the direction of travel is changed from one line to another. The spur curve switch control is a manually operated lever—one on either side of the curve for convenience of the operator—which actuates a lever-and-cam mechanism to raise a steel switch plate on which is a set of independently mounted conveyor wheels.

When the switch lever is placed in the "up" position, the independently mounted wheels are projected above the level of the wheels on the curve and this allows the packages to roll on the main line. Swinging the operating lever down lowers the switch plate wheels below the level of the curve wheels and diverts the load around the curve to the spur line.

The new spur curve is made in two standard widths—12 in. and 18 in.—either in left- or right-hand styles and may be supported on adjustable stands similar to those used for the company's straight sections.

Available in a 4-ft. radius, the spur curve turns 90 deg. This attachment is supplied with a complete set of adjustable guard rails as standard equipment and may be attached by means of the company's universal coupler on any straight section.

NEW EQUIPMENT

ROTARY VACUUM FILLER

A new fully-automatic, 12-spout rotary vacuum filler has been added to the line of filling, capping and conveying machines made by the MRM Co., Brooklyn, N. Y. Having an operating speed of 60 quarts or 80 pints per minute, (smaller containers with a proportionate increase in speed) the machine fills glass and metal containers having a capacity of 1 oz. to 1 qt.

It handles all types of liquids—thin, foamy and viscous. With simple adjustment, the machine can be adapted to fill containers of various sizes and mouth openings. Because its variable speed drive is easily adjusted, it may be used in conjunction with automatic or semi-automatic capping and labeling equipment.

The containers are fed to the rotary either by an operator or an unscrambling table. The intake adjustment positions each container underneath the filling nozzle. During the rotary movement the bottles are filled and then discharged onto the moving conveyor which carries them to the next packaging operation.

Some noteworthy features of the machine are: a fully automatic overflow which eliminates all waste, stainless steel contact parts and an automatic intake and discharge conveyor.

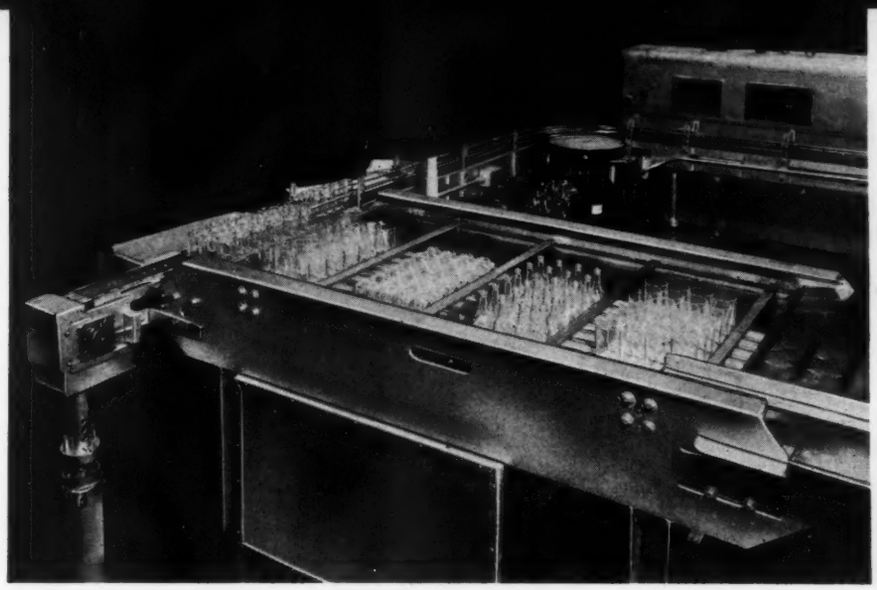
The most outstanding feature of this unit, however, is its absolute simplicity. Any workman can operate it and it requires no skilled maintenance to adjust, operate or maintain. Said to be low in cost, this versatile machine is available for prompt delivery.

UNSCRAMBLER

The latest development in unscrambling mechanisms produced by the Hartford-Empire Co., Hartford, Conn., was demonstrated at the recent Canners' Convention.

Specially designed for handling of almost any size, shape or quantity of glass containers, it feeds them in a closely-packed straight line from the carton onto the conveyor, as illustrated in the accompanying photograph.

The Enliner will handle odd-shaped containers such as square inks, ketchup bottles, pint flasks, tapered tumblers, as well as multi-sized standard bottles and jars.



After the operator has unloaded the case on the special table-like end, the alignment of the containers in the carton is retained as they advance by rows onto the conveyor. Hard impacts are said to be avoided by the start-stop movement of the push bars. The conveyor, operating at a more rapid speed than the unscrambler, provides a clear space for each row of containers as it advances onto the conveyor, from where they may be carried to a washer, filler or labeling machine one at a time in a straight line.

The speed of the Enliner can be geared to meet the operating needs of the next station in the production line. The company reports that baby food jars, for instance, can be fed onto a conveyor at the rate of 500 jars, or 14 cartons, per minute. Through its usage, it is possible to feed embossed glassware onto a conveyor belt so that the embossed or label side is always facing the proper direction when it arrives at the labeling machine, if the ware is so packed in the carton.

Other features of the new Enliner are its height adjustability—it can be raised or lowered to meet the height of any conveyor system—and the fact that all metal parts that come in contact with containers are covered so as to eliminate damaging impacts.

NEW EQUIPMENT

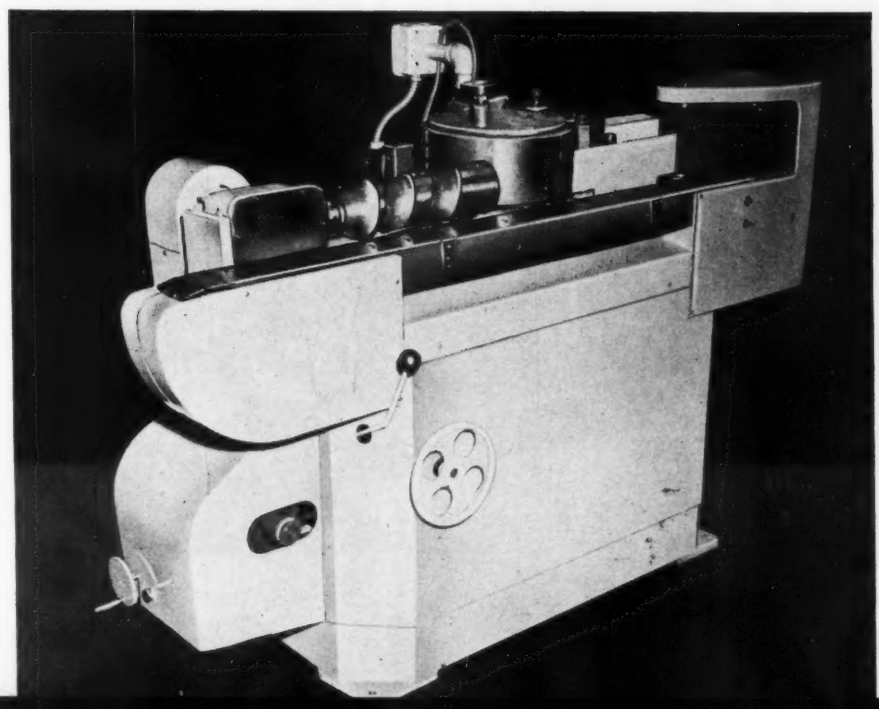
HIGH-SPEED, AUTOMATIC DRY LABELER

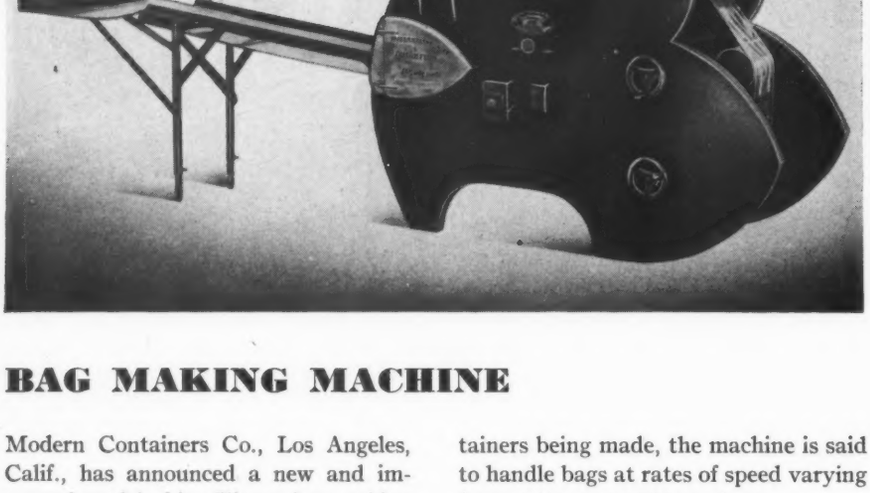
The New Jersey Machine Corp. announces the availability of its new fully automatic, high-speed thermoplastic labeling machine, the development model of which was discussed and illustrated in the article "Thermoplastic Labeler" in the September, 1946, issue of MODERN PACKAGING. This is the machine that for the first time eliminates glue in labeling operations, applying thermoplastic-coated labels by heat-seal.

The new Model 160 is a streamlined, fully automatic machine. It is said to have a speed of 300 bottles a minute. The machine is non-stop, having only one rotary motion and operating without cams or reciprocating movement. As the bottles are carried by plant conveyor onto the labeling machine conveyor, they are lined up solidly. The screw feed synchronizes them with the labels as they come off the label delivery drum for body and/or neck labeling.

A vacuum transfer cylinder removes the labels one at a time from the label hopper and carries them forward to the delivery drum, where they are held in place by vacuum. During its course from the point of receipt to the point of delivery, heated oil transfers heat through the drum and label to the thermoplastic coating which is then fully activated. As the label is brought to the application point, a blast of air, under pressure, adheres the leading edge to the bottle.

In addition to offering high speed, smooth operation, the machine will affix coated labels to surfaces which are normally difficult to label.





BAG MAKING MACHINE

Modern Containers Co., Los Angeles, Calif., has announced a new and improved model of its Clipper bag making machine known as the Chieftan.

It is claimed that the new model will fabricate both the flat and the gusset-type bags made of any heat-sealing material at a wide range of speeds. Depending on the size and type of containers being made, the machine is said to handle bags at rates of speed varying from 3,000 to 10,000 per hour.

Using both heat and adhesive for center seams, it offers a size range of 1 in. by $2^1/_2$ in. to 12 in. by 25 in. and handles printed stock by a mechanical compensator.

The conveyor attachment shown in the photograph is a separate unit. Its purchase with the machine is optional. However, when the conveyor is used with the Chieftan, it provides an excellent and convenient medium for cooling the bags as they finally emerge from the machine heated and sealed. The space from the folding heads to the packing table permits the bags to cool at the center seam and on the bottoms. The conveyor attachment also proves useful whenever an exact count is necessary for packing the bags in individual outer cartons or boxes.

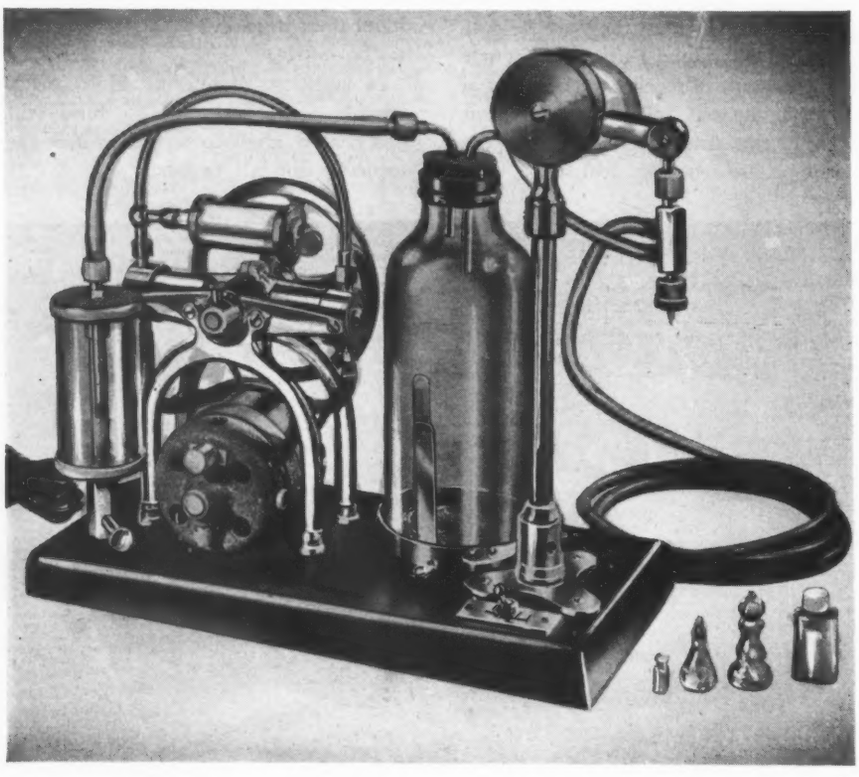
The machine is said to handle all kinds of heat-sealing papers, including cellophane, Pliofilm, etc.

Its simplicity of design and operation eliminates the need of a skilled operator to effect a change-over for different sizes or quantities.

The machine weighs approximately 1,500 lbs.; is 53 in. in height with an over-all length of 75 in. and 30 in. in width. Ball bearing draw rollers, manual print register compensator, complete rotary action, transformer heat controls, versatile adjustability and functional streamlining are among the features of this new improved model.

NEW EQUIPMENT

FILLER FOR MINIATURE BOTTLES



Operated by automatic intermittent electronic control, the new "Minivac" bottle filler made by Shannon Industries, Inc., New York, fills minims and drams up to ounces. It is said to handle perfumes and other light liquids speedily and efficiently.

The drip-proof spout will handle a wide variety of hand-blown and molded miniature bottles and the filling height can be varied quickly and easily by a non-complicated adjustment.

An interesting feature is its air-blast device which makes it possible to clean bottles with filtered air thereby assuring absence of dust, lint and other foreign matter.

In addition to filling, the device will empty bottles of valuable materials for reclaiming.

The entire unit is freely portable, its total weight being approximately 17 lbs. The machine is operated on 110 volt AC, 60, 50 and 25 cycles or on DC current. All parts are chrome-finished and protected by a dustproof cover.

The makers report that the machine is available for immediate delivery.

TEAR TAB

The Heat Seal-It Co., Philadelphia, has developed special heat-seal jaws which form a heat-crimp seal with a perforated easy-opening tab as an integral part of the seal itself. The seal and "built-in" tab are effected in one operation and are said to work on any type of heat-sealable material.

Bags, packets or envelopes are fed to the machine and as the heated crimp jaws close, the seal is made and holes punched simultaneously. The perforated tab may be placed at either of two places: one corner of the bag or in the center of the package.

When grasped by thumb and forefinger, the perforated tab can be easily torn out, leaving a neat round opening from which the contents of the bag can be poured. This method of sealing makes it possible for the user, once the bag is opened, to effectively fold over the top of the bag so that the contents will not be spilled, if they are not completely consumed on the initial opening of the bag.

The manufacturers of the machine assert that when used in the packaging of confections or peanuts, for instance, the device will enable the consumer to place the unused portion of the product in a handbag or pocket without danger of spilling and prevents waste which usually occurs when a bag opening is large or irregular.

It is claimed that this new seal, despite the perforations, in no way affects the water-vaporproofness of the package. This is assured, it is said, by extending the seal below and completely surrounding the punched holes. Once the tab is removed, the protective seal remaining is easily parted by pressure as the product moves to the opening.

NEW EQUIPMENT

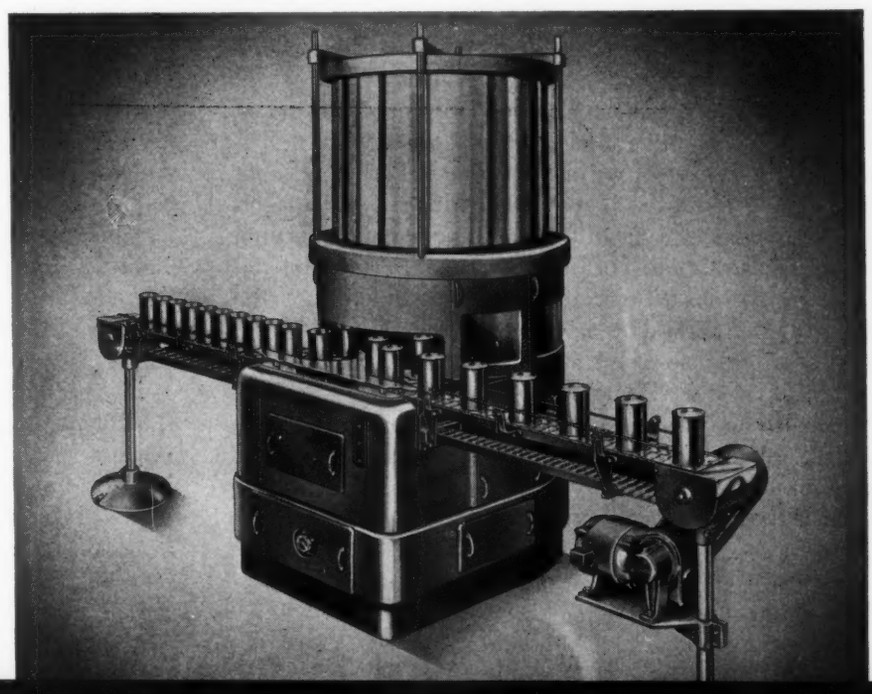
VACUUM FILLER FOR POWDERS

First product of the new Packaging Machinery Division of General Mills, Inc., Minneapolis, is an improved version of the Carter-Vac filler, rights to which have been acquired by General Mills under an exclusive manufacturing and sales agreement with the Carter Engineering Co., Danville, Ill. The new machine combines high speed, effective dust control and uniform packing of powdered products by vacuum. Equipped with 24 heads, the largest model fills 300 1-lb. boxes a minute.

A primary improvement was effected by shielding all moving parts from the powder being filled. In the new model, the gears are enclosed in a separate compartment, dust sealed; the piston rods have been encased in dust-proof rubber bellows, which means that the machine may package abrasive powders without damage to the equipment.

Basically, each head consists of a hopper, a filling nozzle and two exhaust tubes opening into screened compartments. The container being filled rests on top of a pneumatically operated piston which elevates it into filling position. A rubber hood seals the gap between container opening and hopper.

Operating life has been lengthened by re-enforcing all bearing surfaces, the company states. Interchangeability of essential parts has been achieved by designing all models of this rotary vacuum filler as modifications of a single, basic drive unit. Special filling heads adapted for a specific container are the only variables. General Mills is manufacturing three rotary Carter-Vac models, which may be equipped with 8, 12, 16 or 24 filling heads.



PRE-PACKED LAMPS

Put up in neat consumer units at the factory, they save time and space, cut damage loss, reduce retailer's overhead and simplify storage problem

Effective black and white labels tell at a glance the type of lamp in each package. Each label has a photographic illustration of lamp contained, sell-copy cross referenced to "matched designs" in line and a colored sticker matching color of lamp.

Lamp departments in stores are often not very profitable because of high overhead. Store operators are convinced that one of the most important things to assist the retailer in reducing overhead is the consumer unit, factory pre-pack.

Said Charles S. Shaughnessy, vice president of R. H. Macy & Co., before a recent meeting of the General Electric Lighting Institute at Cleveland, Ohio:

"Lamps are fragile. The cost to stores because of damage occurs while merchandise is in stock, in preparation for delivery and in delivering. Proper packaging will save sums of money by cutting down damages. It will save space, facilitate handling, save many man hours in wrapping both "take home" items and deliveries and has a favorable psychological effect on the customer who receives a factory-fresh product."

As in the case of all pre-packs, there is always the question: Who will pay the bill for the better packaging? Mr. Shaughnessy believes that no one really pays, because everyone saves on a satisfactory pre-pack.

Manufacturers already have a packing expense for which their customers pay the bill, but unless this is a complete job nobody benefits. If manufacturers do the job right, retailers will pay for it willingly, he says.

An indication that lamp manufacturers are well aware of this growing need for well designed and well engineered packages to aid in the storage, stocking and merchandising of lamps is revealed by the interest in packaging at the recent lamp show in Chicago.

Among new lamp packages that received much attention at the show were the corrugated cartons presented by William F. B. Johnson, Inc., of Philadelphia for its line of "Matched Design" hand-decorated lamps. This line consists of lamp sets of the same basic design in china boudoir lamps, night table lamps and wall lights, all with similar Lumarith shades.

An idea of the comparative size of the containers may be gained from the accompanying illustration. The largest one is a $15\frac{1}{2}$-in. cube. The cartons are now being spot glued top and bottom instead of taped down. The identifying feature is a group of specialized labels, one for each type of lamp in the line. These labels consist of half-tone reproductions of photographs showing the type of lamp contained in each package, so that

stock-room employees, sales forces and consumers can recognize at a glance what's in each package. In addition the labels give style number and cross references calling attention to the other matched designs in the set. A colored sticker on each label shows the exact color of the Lumarith shade which is contained in the package.

William F. B. Johnson, Inc., planned its first unit packages in paperboard, but has switched to corrugated because of the greater strength of this material. Eventually it hopes to run an over-all design printed in maroon on the cartons to give them a more dressy appearance and get rid of the bareness of the undecorated corrugated.

This company is very proud of the fact that its pre-packaging program was started well in advance of the Shaughnessy speech, which has stimulated a great deal of interest in the lamp trade.

Since the Johnson company's pre-packaging program has been in effect it has met with enthusiastic acceptance, especially by department stores. "We are just embarking on a new selling program of some specialized units through wholesalers," says the company's advertising manager, "and they too have expressed approval because the packaged products can be easily warehoused with no further packaging needed for shipment to retailers or by retailers at the time of sale."

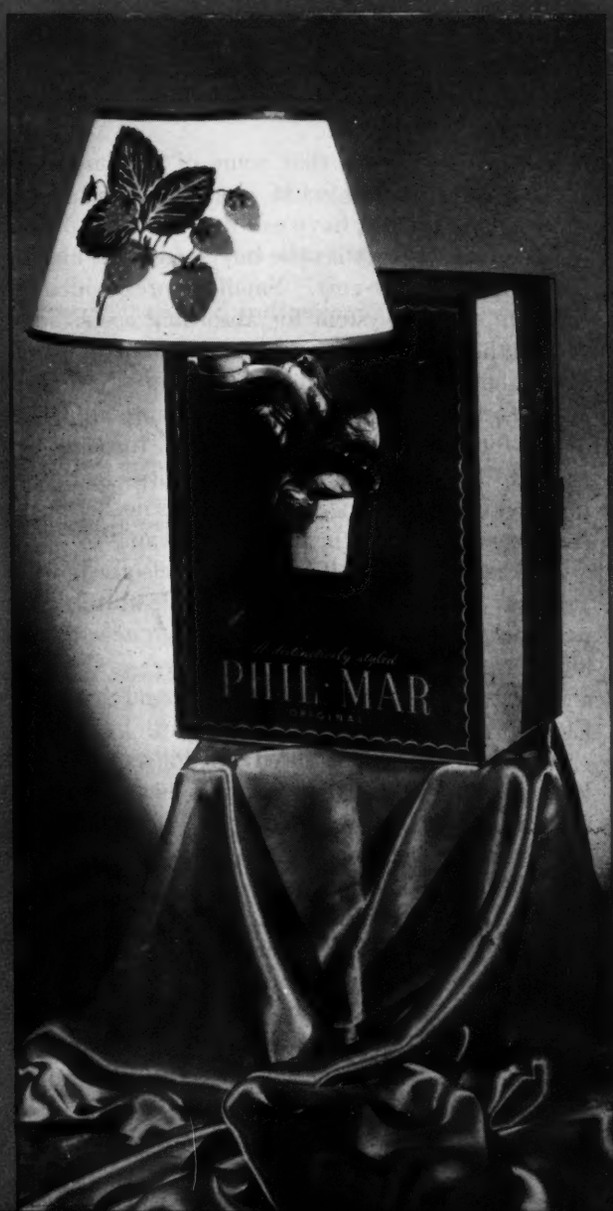
A new method of packaging a complete lamp and shade in one carton as adopted by Godfrey & Wing, Cleveland, adds about 12 cents to the cost of the lamp, it is claimed, and saves the retail store as much as four times that much when breakage, repacking costs and other service overhead are considered.

The ordinary way of shipping lamps consisted of putting 12 unassembled lamps with 12 shades in one carton, 12 globes in another and 12 bases in a third carton. This necessitated the unpacking of these component parts by store stock clerks and repacking each

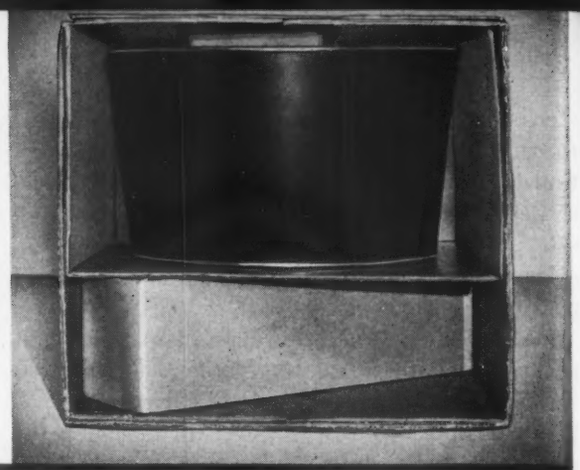
This simple blue and white paperboard folding carton, with corrugated inserts for strength, solves the problem of pre-packaging Phil-Mar wall lamps.

Wall lamp, shade, reflector bowl and 100-watt incandescent bulb are fitted into the carton by means of a space-saving divider, carefully engineered.

Placed on end, package becomes display setting for lamp, which is hung or "pinned up" on box. Cord, run through pre-scored hole in box, is not visible.



Printed corrugated box with corrugated inserts and cushioning material holds lamp base, finials, stud, shade, globe, etc. Package adds 12 cents to cost, but saves the retailer four times that much in breakage, repackaging costs, time and other services.



This cross section of the Godfrey and Wing pre-packed lamp package shows how compactly the various units of the assembly fit into space engineered to its requirements.

assembly individually for delivery to a customer. Stores thus had three partially unpacked cartons "floating around" to add to damage risk. When several different styled shades were included in one carton, the entire package had to be unpacked to secure the desired style.

Godfrey & Wing's well engineered new package contains lamp base, finial, stud, shade, globe, etc., without exposing any of the items to possible normal shipping and stocking breakage.

The company says that some of the larger stores, because they realize what packaging costs save in service departments, have asked to have the packaging billed separately so that the buyer does not absorb the cost as merchandise cost. Smaller stores, which have a less complicated system for absorbing costs, have accepted the lamp packaging costs without question because they realize the time savings involved in being able to select from stock the desired lamp all packaged, ready for sale, without rummaging through several boxes to find what the customer wants—in the meantime taking the chance of losing a sale because of a customer who hasn't the patience to wait.

Packaging of a wall lamp, shade, reflector bowl and a 100-watt incandescent lamp as a single unit in a simple paperboard folding carton introduces a new packaging idea for wall units. An attractive and practical answer to this problem has been found by Phil-Mar Electric, Inc., another Cleveland firm.

The new package is titled "A Package of Light." It enables the sale of the four units as a complete item with a minimum of wrapping and facilitates handling by the retailer before making delivery to the purchaser. In addition, the carton can be used in a variety of ways for store and window display.

A paperboard divider separates the shade and reflector bowl from the metal stand and cord within the carton. The inverted V-shape of the divider permits a tight fit and full utilization of all space, protecting the shade against crushing. The scored paperboard carton is equipped with tabs on the cover flap. There is a pre-scored hole in the bottom panel of the package, through which the lamp cord may be passed when the box is set up as a display piece.

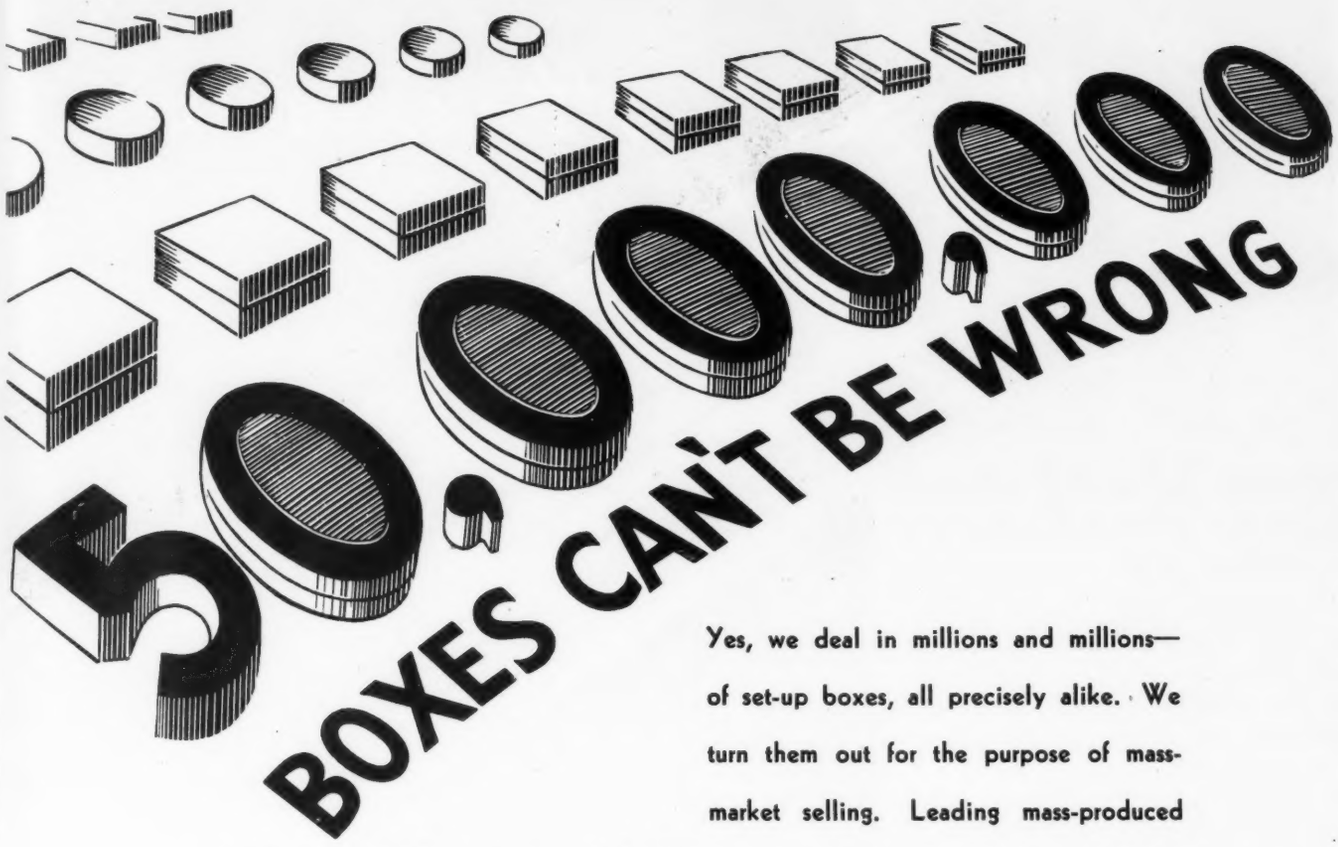
To utilize the box for display purposes in store windows or on counters, the package is placed on end and a weight placed inside. The lamp, with shade attached, is hung or "pinned up" to the box and the cord is run through the hole in the panel so that it is not visible. Set up in this manner, the package makes as complete a display as if a special panel or background were used. The only copy visible when the display is set up is "A distinctively styled Phil-Mar original" below the lamp.

The design and coloring of the carton is done in a modern and rather restrained fashion to provide a wall-like background when it is used as a display. Coloring is blue and white. The top and bottom panels are blue with a scalloped white border along the outer edges. The white side panels have a wide blue border near the top. All sell copy is in reverse white on the blue background.

Interesting is the fact that sell copy on the cover is printed horizontally while on the bottom panel it is printed vertically. This enables pyramiding of the packages in a variety of combinations for display purposes.

Successful users of lamp pre-packs have realized that the problem is more than selecting a sturdy carton to protect against damage. A good package must be an engineered package that is the result of study by package experts who know how to achieve the desired results at a minimum cost with a conservative use of materials and space-saving features.

CREDITS: *Phil-Mar Electric and Godfrey & Wing packages, Container Corp. of America, Chicago. William F. B. Johnson, Inc., boxes, Container Corp. of America; labels, National Label Co. and Fidelity Press, both of Philadelphia; color stickers, Tompkins Label Service, Philadelphia.*



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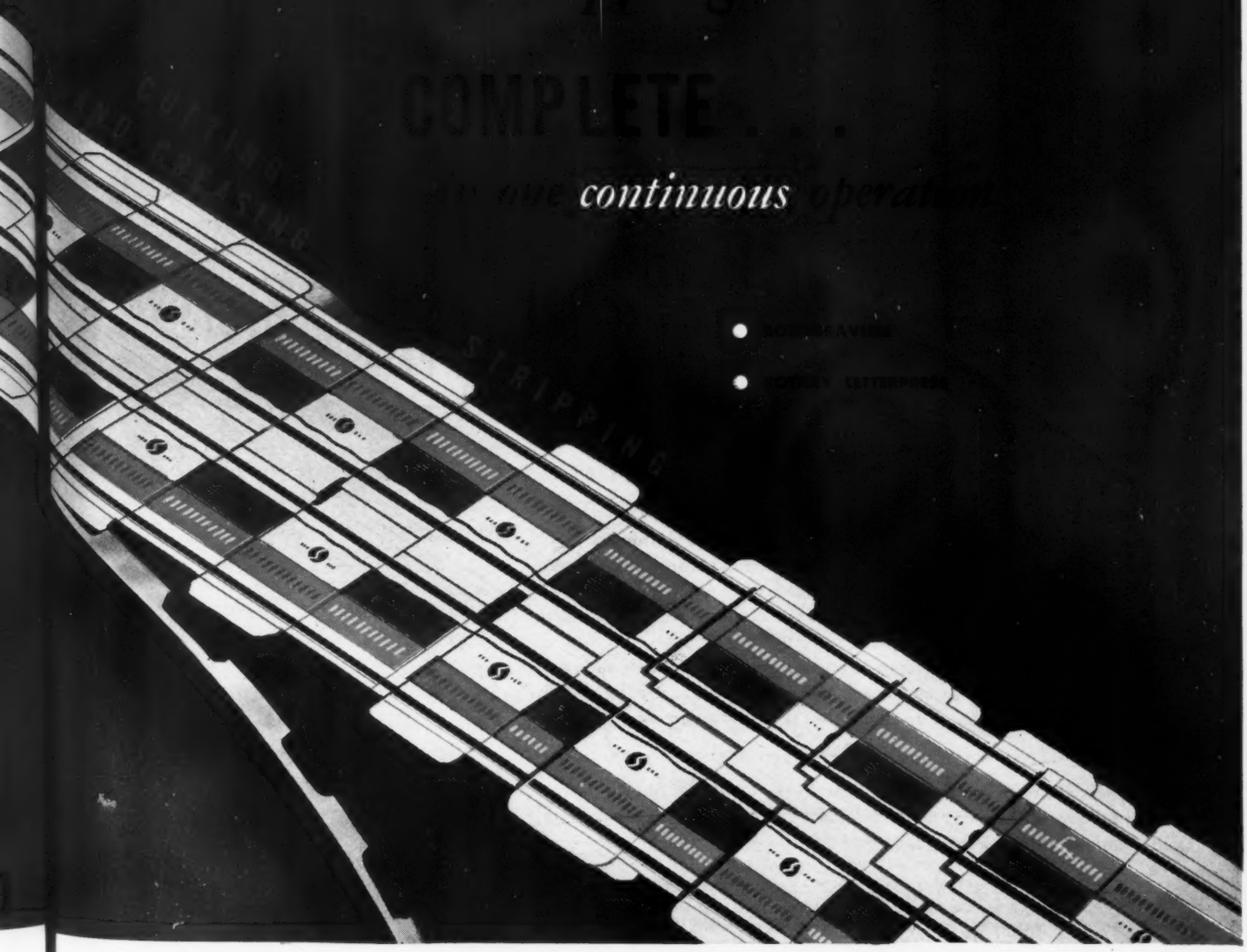

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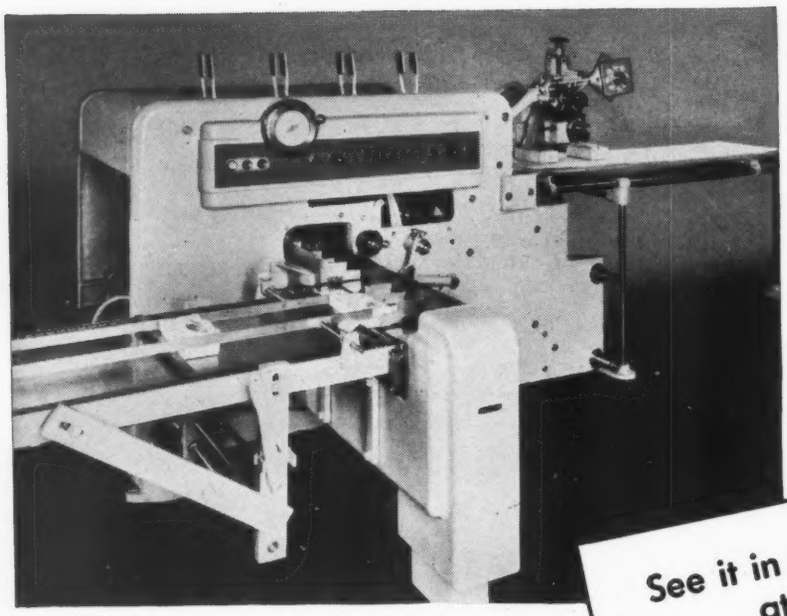

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MOLD CONTROL

Study of the susceptibility of packaging materials to mold and a review of means of inhibiting or preventing development

by C. G. LAVERS*

The growth of molds on packaging materials is a problem often encountered both before and after the package has been formed and filled. Growth is particularly likely to develop on packaging materials if they are stored under damp conditions or if they are used to package substances that have a high moisture content or that are likely to take up large quantities of moisture from the air. It is, therefore, often necessary to use materials that are resistant to attack by molds and sometimes it is desirable that besides being resistant itself the packaging material inhibit growth on the product it encloses.

In this article the mold resistance of various packaging materials will be discussed and some methods of moldproofing suggested.

Conditions favoring mold growth

For better understanding of the problem, a knowledge of the conditions under which molds flourish is of value. These conditions will, therefore, be reviewed briefly before methods of controlling molds are considered.

Molds are microscopic plant-like organisms which, when they mature, form spores similar to the fruit of normal plants. These spores are given off into the air in large numbers and, being microscopic in size, remain in suspension and are easily carried from place to place by slight air currents. Before molds can grow on any body it must have been infected by these spores. Air-borne spores are probably the chief source of infection of packaging materials although other sources are possible, i.e., from water, workers' hands, etc.

After infection by spores has occurred, mold growth will begin if conditions are favorable. Moisture and a suitable temperature are required. Although optimum conditions vary from species to species, maximum growth usually occurs when the relative humidity is around 95% and the temperature between 68 and 104 deg. F. (1, 3, 11, 20, 23, 27).† Below 75% relative humidity, little or no mold will grow.

Molds are aerobic organisms, i.e., to grow they require air. They do not, however, need light; in fact radiations, particularly in the ultra-violet, are fatal to many species.

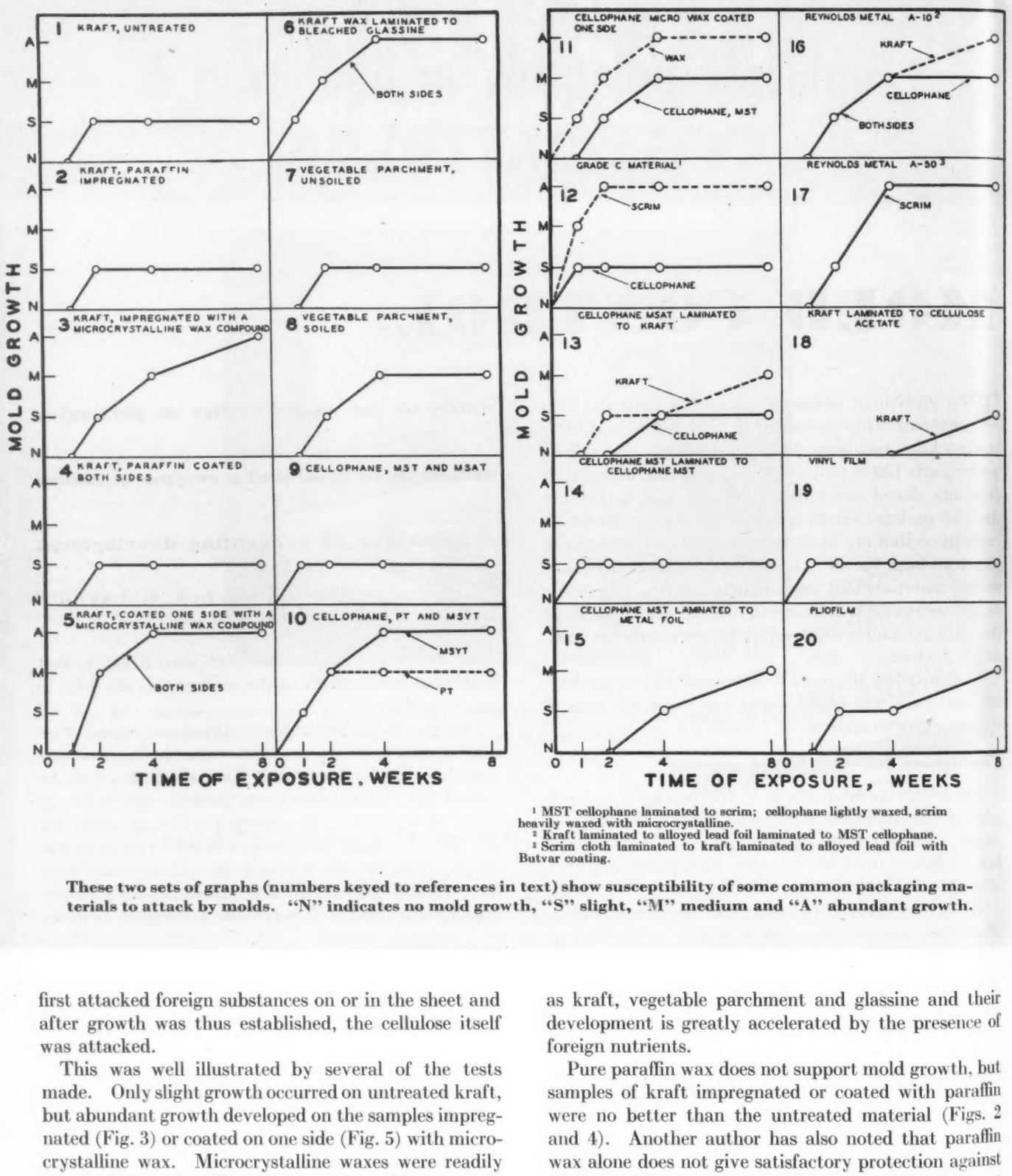
Besides having favorable conditions of temperature and humidity, molds must have suitable chemical surroundings in which to grow. Toxic substances must be absent and although molds can grow at a pH as low as 2.0 or as high as 9.0, they prefer the neutral range (23, 27, 28). In addition, materials must be present that the organisms can use as a nutrient. This nutrient may be a packaging material or the product in a package. Packaged food stuffs often provide an excellent medium.

Susceptibility to mold

Many packaging materials can be utilized as a nutrient by molds, i.e., attacked by them. The susceptibility of several common packaging materials to attack has been studied (16) and some of the results are presented in Figs. 1 to 20. In this study the materials were inoculated with mold spores and stored in a mold-infested cabinet operating at 95 deg. F., 95 to 100% relative humidity. The extent of mold growth on samples was noted at intervals up to eight weeks and classified into one of four groups: none (N), the sample was entirely free of mold growth; slight (S), growth had begun at particles of foreign matter on the surface of the sheet; medium (M), growth was more general and the molds were actually feeding on the material; abundant (A), growth was heavy and general.

Untreated kraft paper was not readily attacked by molds under the conditions of this experiment (Fig. 1). It appeared that with most cellulosic materials molds

* Division of Applied Biology, National Research Council Laboratories, Ottawa, Ont.
† Numbers in parentheses refer to "References" appended.



[1] MST cellophane laminated to scrim; cellophane lightly waxed, scrim heavily waxed with microcrystalline.
[2] Kraft laminated to alloyed lead foil laminated to MST cellophane.
[3] Scrim cloth laminated to kraft laminated to alloyed lead foil with Butvar coating.

These two sets of graphs (numbers keyed to references in text) show susceptibility of some common packaging materials to attack by molds. "N" indicates no mold growth, "S" slight, "M" medium and "A" abundant growth.

first attacked foreign substances on or in the sheet and after growth was thus established, the cellulose itself was attacked.

This was well illustrated by several of the tests made. Only slight growth occurred on untreated kraft, but abundant growth developed on the samples impregnated (Fig. 3) or coated on one side (Fig. 5) with microcrystalline wax. Microcrystalline waxes were readily attacked by molds (Figs. 3, 5 and 11). Microcrystalline wax-laminated samples of kraft were also more readily attacked by mold than was plain kraft (Figs. 6 and 13).

When samples of vegetable parchment were soiled by perspiration prior to storage in the humidity cabinet, they developed mold growth more rapidly and more extensively than did unsoiled samples (Figs. 7 and 8). Molds will, therefore, grow on cellulosic materials such as kraft, vegetable parchment and glassine and their development is greatly accelerated by the presence of foreign nutrients.

Pure paraffin wax does not support mold growth, but samples of kraft impregnated or coated with paraffin were no better than the untreated material (Figs. 2 and 4). Another author has also noted that paraffin wax alone does not give satisfactory protection against mold growth on paper (4). The most vulnerable part of paraffin-coated sheets would probably be at folds where the paraffin coating would be broken and the cellulosic fibres exposed. The value of paraffin-wax coatings would likely be greatest when the wax does not contain any foreign nutrients and when rather heavy coats are used.

Only slight growth occurred on MST and MSAT cellophane (Fig. 9), but the MSYT and PT types were

more readily attacked (Fig. 10), developing abundant and medium growths respectively. As with kraft, when materials subject to attack were present on cellophane (when it was microcrystalline wax-coated or used in a lamination), it became more susceptible to attack (Figs. 11, 15 and 16). However, this effect was not as great with cellophane as with kraft.

Scrim cloth, used to give added strength to packaging materials, was very subject to mold attack (Figs. 12 and 17).

No mold grew on cellulose acetate under the conditions of test (Fig. 18). The excellent mold resistance of this material is quite well established and has been reported by several authors (1, 13, 29). Only slight growth occurred on vinyl film after eight weeks storage (Fig. 19). Growth on Pliofilm reached the medium stage (Fig. 20), but some doubt existed as to whether the molds were actually feeding on the base sheet.

The mold resistance of most of the plastics used for packaging has recently been investigated (2). Cellulose acetate, cellulose acetate butyrate, ethyl cellulose, polyethylene, polyvinyl chloride and polyvinyl chloride-acetate copolymers appear to be mold-resistant. Some difference of opinion exists regarding polyvinyl acetate (2), but it appears to have quite good resistance. Cellulose nitrate, however, supports moderate growth. In practice, thermoplastic materials are almost invariably modified by the addition of plasticizers and a resistant base material would be of little value if it contained a plasticizer that was very susceptible to mold attack. Fortunately, the resistance of most of the common plasticizers has been determined (2) and so it will usually be possible to choose one that is not readily attacked.

Simply because a packaging material does not support mold growth itself does not necessarily mean that it will prevent growth on products placed in it or on organic debris that happens to fall upon it. For this reason it is sometimes necessary to incorporate antiseptic chemicals into packaging materials even though they are themselves inert.

Methods of reducing mold growth

Methods not involving the addition of antiseptics: Some mold problems can be solved, or at least alleviated, without resorting to the use of chemical preventives. One method by which mold growth in packages can be reduced is by limiting the number of spores that get into them. This can be done by practicing thorough sanitation at both the fabricating and filling plants. Molds must not be allowed to grow in the plant and have their spores carried by the air to the product. Irradiation of the product and package with ultra-violet light during the packaging operation is useful for killing many of the spores present and may also be used for reducing the number of spores present in the air (8, 9, 23).

If it is possible to control conditions, one of the best methods of preventing mold growth is to maintain low relative humidity and temperatures. Humidity is the more important of these two factors, since little or no mold will grow below a relative humidity of 75%. Efficient vacuum packing will also prevent growth, since molds require air to grow.

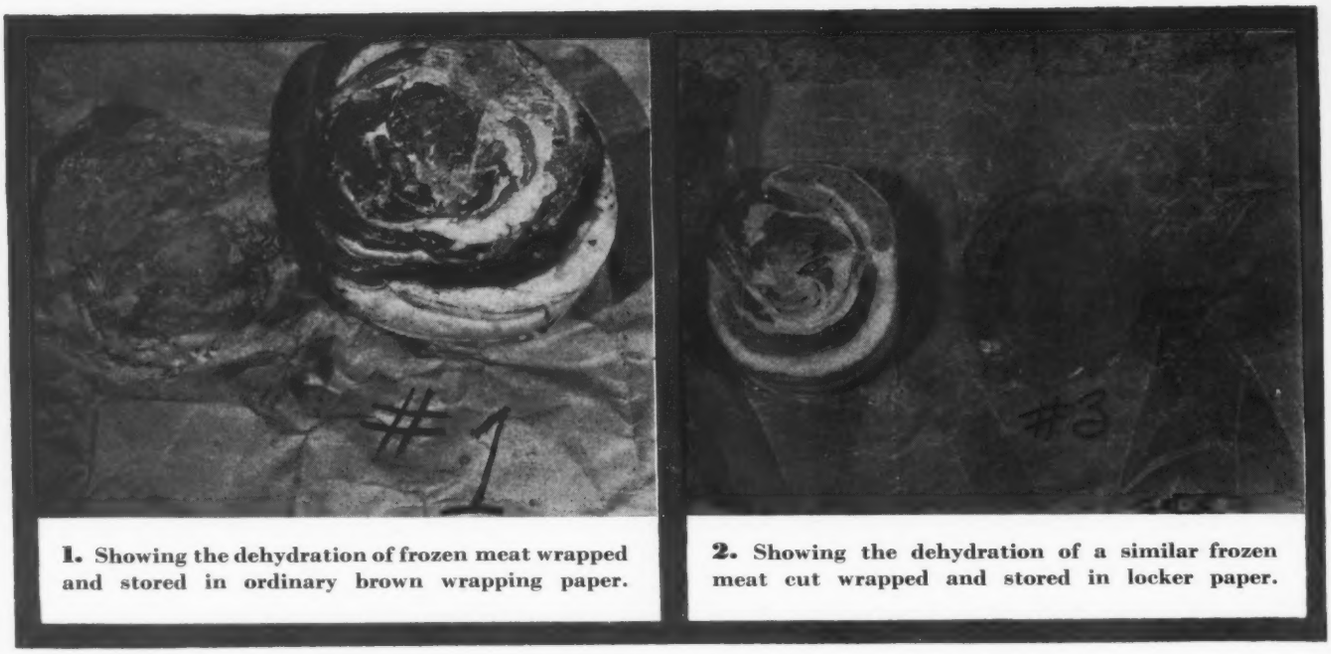
If the product being packaged does not support molds, growth can be prevented by using resistant packaging materials In this regard care should be taken to use mold-resistant plasticizers and to avoid starch and protein sizes which act as food for molds and so enable them to develop.

Antiseptics for packaging materials: When it is not practical to use the methods of control mentioned above, it may be necessary to resort to chemical mold-proofing agents. A great many substances have been tested and used for this purpose, but only a few of the more important ones will be discussed. All agents are not suitable for all applications and such properties as toxicity and odor must be taken into consideration.

Calcium propionate may be used to impart mold resistance if conditions of temperature and humidity are not severe. This compound has much to recommend it in that it is odorless, does not taint food products at effective concentrations and is not toxic. It has been used successfully for treating butter and cheese wraps (15, 24).

Besides protecting the packaging material into which they are incorporated, some compounds are sufficiently volatile so that their vapors prevent mold growth on the product in the package. Biphenyl and o-phenyl phenol are two compounds of this nature that have been used for impregnating fruit wrappers (19, 25, 30). Rubber-hydrochloride film containing biphenyl, o-hydroxybiphenyl or chlorobenzoic acid is also claimed to be suitable as a mold inhibiting wrap for foods (31). Other compounds that appear promising for this type of application, but which may not be suitable for use with food wrappers are: benzaldehyde, 2-chloropyridine, ethyl mercuric chloride and o-chlorophenol (26). Pentachlorophenol is another compound of the slightly volatile type, but is often used solely to protect the packaging material. It has been used successfully for treating both paper and fibreboard (5, 23). To mold-proof paper, soluble sodium pentachlorophenate is added to the stock in the beater and insoluble pentachlorophenol is later precipitated by the action of alum or other acidic compounds and is retained in the sheet. Because of its strong odor and toxicity, pentachlorophenol is not generally suitable for food wrappers. It has been used, however, to prevent mold growth in stored eggs by impregnating the fillers and flats to the extent of about 0.4% (21). At this concentration no odor or flavor was imparted to the eggs.

Phenyl mercuric compounds are highly fungicidal (6, 14, 22), but unfortunately they are also toxic and produce skin irritations. They have been used successfully to protect fibrous materials at concentrations as low as 0.00175% (6) and for microcrystalline waxes at 0.1% (14). It has been shown that at low concentrations (0.05%) these compounds probably will not affect the skin (22). Safety levels (*Continued on page 218*)



1. Showing the dehydration of frozen meat wrapped and stored in ordinary brown wrapping paper.

2. Showing the dehydration of a similar frozen meat cut wrapped and stored in locker paper.

FREEZER WRAPS

Need for better locker papers emphasized by Frigidaire studies, tracing complaints on quality to the wrapping materials used

by D. C. McCOY, S. V. COOK and G. A. HAYNER*

Proper packaging or wrapping is one of the most important factors in the production of high quality frozen food. It is necessary to prevent dehydration, oxidation, enzymatic changes and loss of flavor and appearance. Many complaints with present-day frozen food can be traced directly to the use of unsuitable materials and to the improper application of good materials.

This investigation was aimed primarily at problems of home and locker plant freezing. However, the fundamentals apply to commercial freezing as well as home freezing.

While these tests were being conducted, and since, many complaints were received from locker operators, users of home freezers and users of locker service regarding dehydration and other adverse characteristics of frozen meats. Most of these have been traced back to the use of poor wrapping materials.

Much useful fundamental data bearing on these studies was obtained from development work connected with packaging of aircraft and ordnance materials during the war. The problem then was to keep moisture *out* of the package, whereas the problem with frozen food is to keep moisture *in* the food and package. Both involve the use of an adequate water-vapor barrier and proper application methods.

Some of the materials used in these tests are not yet available. The water-vapor barrier aspects will be emphasized in this paper. Other properties, however, are important.

Test procedure

Laboratory determination was made of water-vapor transmission at 100 deg. F. and 90% relative humidity. A 4-lb. rolled rib roast was wrapped with a single layer of material using the drugstore wrap and stockinette overwrap. The sample was frozen by the contact methods and stored at 0 deg. F. While in storage, the sample was weighed monthly.

At the conclusion of the test the final gross weight was taken. The sample was unwrapped, noting the condition of the wrapping material and the appearance and odor of the contents. The frost collected on the surface of the roast was then brushed off with a stiff brush and the net weight of the meat determined. If

* Of the Appliance Sales Dept., Engineering Dept. and Commercial Sales Dept., respectively, of the Frigidaire Division, General Motors Corp., Dayton, Ohio. This paper was presented at the meeting of the American Society of Refrigerating Engineers, New York, Dec. 16 to 18, 1946.

the condition of the used material permitted, it was tested for water-vapor transmission after use. The samples of meat were finally cooked and judged for edibility and acceptability.

Tabulation of data

Table I was prepared as a method to evaluate the over-all suitability of frozen food packaging and wrapping materials. Du Pont 300 MSAT 83 cellophane was used as a standard. A score of 50 or over generally will rate a material as satisfactory. However, a single undesirable characteristic may classify a material as unsatisfactory. For example, in Item 1, if a material is toxic naturally it is eliminated, since it is not safe for use with human food. Item 2 eliminated sample "M" as it had such a disagreeable odor that it was considered unsuitable for use. If the laboratory MVT shown by Item 3 is very high, 0.5 gram per 100 sq. in. per day or over, the material should be suspected. Some materials were found to deviate from this generality.

Table II gives detailed and over-all evaluation of each material based on Table I. Materials from a previous test have been included (samples 1 to 9). Materials having a rating of 50 are considered satisfactory. (Note that the identification of all samples in these tables is given in Table VI.)

Tables III, IV and V divide the materials shown in Table II into three general classifications. The standard material—namely, Du Pont 300 MSAT 83 cellophane—is shown in each table for comparison.

These tables show the laboratory WVT before and after use, the actual and percentage gross weight loss after 12 and 16 months' storage and the final net weights determined at the conclusion of the test.

These tables also show considerable difference between the various samples. Some showed a progressively increasing loss of gross weight due to moisture passing through the material indicating it is not a suitable water-vapor barrier. Others showed only negligible losses and are thus satisfactory water-vapor barriers *provided that they can be and are always applied correctly.*

The net weight loss gives an indication on the better barrier materials of their ability to cling to the meat surface during frozen storage, thus reducing surface dehydration to a minimum.

Trying to correlate the WV transmission determined at 100 deg. F. and 90% relative humidity by laboratory means with the actual losses during storage substantiates findings of an earlier test—namely, that laboratory determinations are not necessarily a reliable index of the value of materials for frozen food protection. This particular test shows that some materials having a relatively high laboratory WVT value (samples "N," "O" and "P") seem to perform differently at low temperatures and in practice appear to be very satisfactory as frozen food wrapping material. Others with low laboratory WVT values (samples "C," "Q" and "R") were not satisfactory in actual use.

Facilities for WVT determination at 0 deg. F. were not available. So far as the authors know, little or no laboratory WVT work has been done at 0 deg. F. It is felt that WVT data taken at that temperature might be a better guide than at 100 deg. F. and might show a better correlation with practical weight loss tests such as these.[1]

In Table III only two samples, namely, "B" and No. 8, show weight losses anywhere near comparable with the standard. Sample 8 could be expected to show better performance as this material is furnished for use as a double wrap and was so used. The relatively low losses shown by Sample No. 2 were also due to its use as a double wrap. This particular material did not have sufficient physical strength to permit its use as a single wrap. The only paper which could be considered anywhere near satisfactory is Sample "B." Samples 1, 2, 3 and 6 definitely produced the results which might be expected based on the laboratory WVT's. Samples "Q" and "R," while showing very low laboratory WVT comparable to the standard, when applied to the meat and stored at low temperature produce results similar to those having high water-vapor transmission characteristics.

Figs. 1 and 2 are typical of the results obtained with this class of material. Fig. 3 shows results with the cellophane standard. All are from a previous test and were taken after 10 months' storage at 0 deg. F. Similar results were obtained in this test.

Table III and Figs. 1, 2 and 3 thus show that the paper materials tested, whether waxed or unwaxed, are

[1] ED. NOTE: There is ample evidence that water-vapor permeability tests must be run at conditions at least approximating the actual storage conditions. Suggested as references are: "New Plastic Films—Their Packaging Qualities," by William H. Aiken, MODERN PACKAGING, May, 1946, and "For Better Usage —Water-Vapor Permeability," by C. A. Southwick, Jr., MODERN PACKAGING, July, 1946. Actually, a great deal of work along this line has been done in packaging laboratories and the method of determination of water-vapor permeability at 0 deg. F. has been proposed in Packaging Institute Standard Test Methods, No. 1, "For Water-Vapor Permeability at 0 deg. F.," published in the July, 1946, issue of MODERN PACKAGING.

While this article is of particular interest to home or locker plant users of packaging materials for frozen food preservation and to the manufacturers of such materials, it will also be instructive to all frozen food packagers. The test product, rolled beef roast, is an excellent choice because of its value and susceptibility to deterioration. It will be noted that none of the commercial locker papers used as a single wrap meets the minimum standard established by the authors as satisfactory, the only acceptable materials in this class being a frozen food type of cellophane.

TABLE I—METHOD FOR RATING FROZEN FOOD WRAPPING MATERIALS

No.	*Characteristics*	*Scoring factor 5 or 4*	*Scoring factor 3 or 2*	*Scoring factor 1 or 0*	*Remarks*
1	Toxicity	Non-toxic (score 5 only)	Slightly toxic but safe for human food (score 2 only)	Toxic—not safe for human food (score 0 only)	If score is 0 material is unsatisfactory
2	Odorless	Entirely odorless (score 5 only)	Slight odor (score 2 only)	Pronounced odor (score 0 only)	If score is 0 material is unsatisfactory
3	Water-vapor trans.—grams per 100 sq. in. per 24 hrs. at 100° F. and 90% R.H.	0.4 gm. or less / 0.4 to 0.4999 gm.	0.5 to 1.75 gm. / 1.76 to 2.99 gm.	3 gm. or over	Materials over 0.5 gm. should be suspected
4	Ease of application	Easy to wrap with simple motions and minimum time. No expensive special equipment needed. Applies closely and neatly to meat surfaces	Moderately easy to handle and tie or tape. Package slightly loose	Difficult to handle. Requires expensive special equipment. Doesn't wrap tightly to meat surfaces	Use "drugstore" wrap. Apply coated side to meat. Material should adhere to meat surfaces. Check frost formation between wrap and meat and net weight loss after storage
5	Heat-sealing properties	Readily heat sealed. Holds seal at low temperatures	Difficult to heat seal. Seal deteriorates at low temp.	Will not heat-seal. Will not hold seal at low temp.	
6	Ease of marking for identification	Easily marked with usual methods. Absorbs ink without running or smearing	Marking moderately difficult	Difficult to identify or mark; ink or pencil smears. Requires special method of identification	
7	Waterproof, stain- and greaseproof	Waterproof. Does not absorb meat juices or grease	Moderate absorption	Not waterproof. Wrapper absorbs juices and grease readily	
8	Structural strength before freezing	No tearing or bone punctures with moderately hard handling. Not affected by water. No delamination	Moderately strong, few bone punctures. Weakened by moisture. Some delamination	Tears or bone punctures easily. Not strong, not satisfactory. Delaminates	
9	Strength at low temperatures	Flexible after 1 year storage. Does not tear, shatter or delaminate	Moderately flexible. Tears, shatters or delaminates slightly	Shatters or tears easily, delaminates badly	Unsatisfactory if score is below 2 with stockinette overwraps
10	Per cent loss through wrapper after 1 year storage at 0 deg. F. (loss of gross weight)	0.2% or less / 0.2 to 0.499%	0.5 to 0.7% / 0.71 to 0.899%	0.9% to 1.0% / Over 1%	If over 1% material is not satisfactory
11	Stripping qualities	No adherence to meat, wrapper comes off clean with no "flaking"	Wrapper comes off moderately clean	Wrapper sticks to meat or comes off with grease or meat adhering or leaves "flakes" on meat	
12	Appearance of product	Bright, fresh appearance no dehydration	Moderately bright and fresh, some surface drying	Badly dried, discolored	
13	Taste test rating	Entirely acceptable—5. Slightly dry but not off flavor—4	Traces of rancidity or off flavor but edible	Not acceptable. (score 0 only)	

not satisfactory for storage of frozen meats. They also explain many complaints from users of home freezers and locker plant service.

Table IV summarizes the results obtained with a relatively new type of frozen food wrapping material, namely, laminates of various materials. In general, the results obtained with the laminates are better than those obtained with the papers. It is interesting to note that samples "O" and "P" showed high laboratory WVT rates. However, under practical test at low temperatures, actual moisture losses compare favorably with the cellophane standard. Most laminates used in this test were quite stiff and rather difficult to handle in the actual wrapping operations. They did not adhere well to the meat surfaces and delaminated during storage. Some had no better strength under storage conditions than some of the other simpler and less expensive materials. Fig. 4 shows a typical example of delamination.

Table V includes such materials as aluminum foil, cellophanes, Pliofilms, etc. The over-all performance of this group is superior to the other two groups. Some of them having high laboratory WVT values (samples "N" and "T") perform very well in practical use.

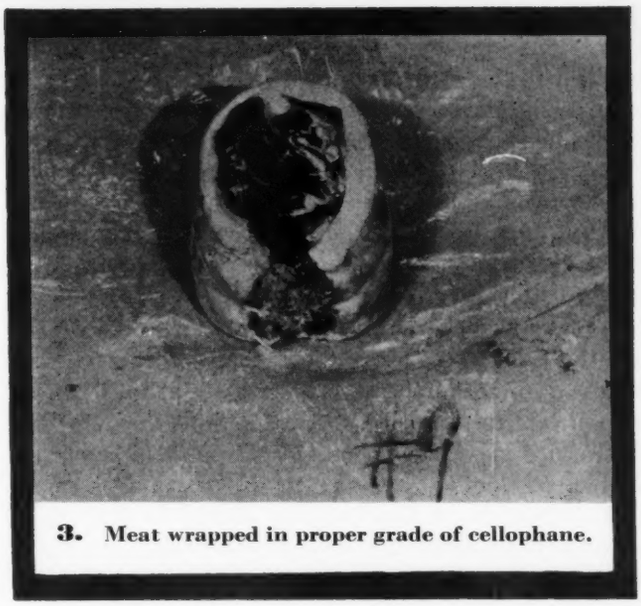
It is interesting to note that in experimental meat aging work conducted cooperatively with the Kroger Food Foundation, the WVT losses and storage characteristics shown for cellophane in these tests were very closely paralleled. In very few cases was a gross weight loss of over .006 to .01 lb. noted on 300 samples. Where higher losses did occur, it was definitely traceable in most cases to breaking of the wrapping material during the storage period.

The columns on Tables III, IV and V headed "Taste Test Rating" cannot be taken too seriously in connection with this test as most of the samples were held beyond a 12 months' storage period. Experience indicates that while it is possible to store odd samples of beef successfully for longer periods, it is still good practice to use it up at 12 months or less, particularly present-day beef.

TABLE II—WRAPPING MATERIAL RATINGS

Sample	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*Total score*
A	5	5	3	4	0	5	5	5	5	5	5	5	3	55
B	5	5	3	4	0	0	2	4	4	4	5	2	5	43
C	5	5	3	2	0	0	5	0	5	0	5	0	5	35
D	5	5	3	4	4	4	5	5	1	4	5	4	2	51
E	5	5	3	4	4	4	5	5	1	4	5	3	5	53
F	5	5	3	4	0	5	5	1	3	5	5	4	4	49
G	5	5	5	5	5	4	5	5	5	5	5	4	5	63
H	5	5	0	2	0	4	5	0	1	0	0	0	2	24
I	5	5	3	2	0	0	5	0	1	5	0	4	3	33
J	5	5	5	3	0	0	5	3	1	4	2	5	2	40
K	5	5	0	5	4	4	5	5	1	2	5	3	3	47
L	5	5	3	3	0	5	5	5	1	5	5	4	3	49
M	5	0	5	4	0	4	5	0	2	5	5	5	5	45
N	5	5	0	5	4	4	5	5	1	4	5	5	5	53
O	5	5	2	5	4	5	5	5	4	5	5	4	5	59
P	5	5	0	4	4	5	5	5	5	4	5	5	3	55
Q	5	5	3	3	0	5	4	3	4	0	5	0	4	41
R	5	5	5	4	0	5	2	4	4	0	5	0	3	42
S	5	5	3	4	5	4	5	3	4	4	5	4	2	53
T	5	5	2	5	5	4	5	5	4	4	5	5	2	56
U	5	5	3	5	5	4	5	5	4	4	5	4	3	57
V	5	5	3	5	5	4	5	5	4	5	5	3	3	57
W	5	5	3	3	0	5	2	5	4	0	5	0	5	42
1	5	5	0	3	0	4	0	3	3	0	2	0	3	28
2	5	5	0	0	0	0	3	0	0	0	1*	1*	2*	17
3	5	5	0	3	0	5	3	4	5	0	5	0	5	40
4	5	5	3	3	0	5	3	4	5	0	4	0	5	42
5	5	5	3	3	0	5	3	4	5	0	5	0	3	41
6	5	5	0	3	0	5	3	4	5	0	5	0	2	37
7	5	5	2	3	0	5	3	4	5	0	4	0	3	39
8*	5	5	3	3	0	5	3	5	5	2	5	4	5	50
9	5	5	5	5	5	3	5	4	4	5	5	5	5	61

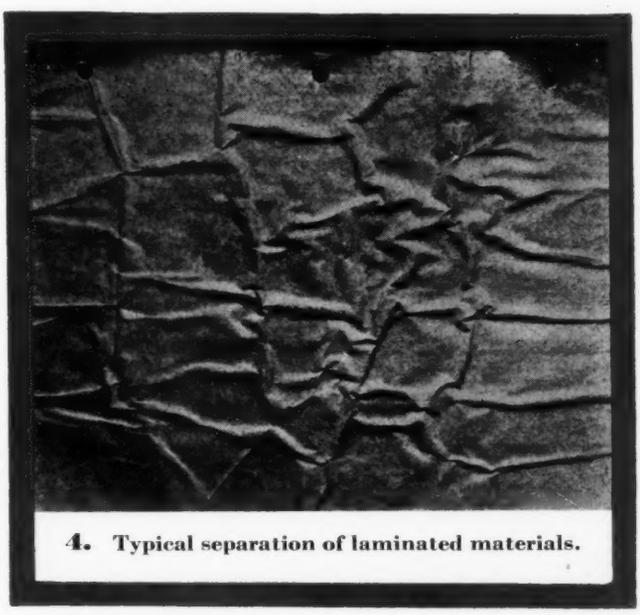
* Data based on double wrap.



3. Meat wrapped in proper grade of cellophane.

Conclusions

1. Laboratory WVT values at 100 deg. F. and 90% relative humidity are not a reliable index of the suita-



4. Typical separation of laminated materials.

bility of materials for wrapping frozen foods.

2. The importance of the material's being tightly applied to the surface of the meat was proved by this test as shown in former tests. A good material must be flexible enough so that this is possible.

3. Some materials require rather careful handling at low temperatures as they have a tendency to shatter when cold. Additional mechanical protection similar to the stockinette overwrap is needed to guard against this possibility.

4. While no attempt has been made to study the relative costs of the use of these materials, it is felt that this is of minor importance when the difference of perhaps 1 cent to wrap a $1 steak represents the difference between a good and an inferior, if not completely inedible, product.

5. The refrigeration industry should do everything it can to promote the use of better materials to wrap and package frozen foods in order to protect its market for equipment in this field.

TABLE III—LOCKER PAPERS (STORAGE AT 0 DEG. F.) WEIGHT LOSS SUMMARY, ROLLED RIB BEEF ROAST

Sample	*WVT* before use*	*Gross loss, 12 mo.*		*Gross loss, 16 mo.*		*Net loss, 16 mo.*		*Taste test rating*
		Lbs.	*%*	*Lbs.*	*%*	*Lbs.*	*%*	
B	1.515	0.025	0.496	0.04	0.79	0.035	0.71	43
C	1.505	0.12	2.5	0.18	3.78	0.19	4.05	35
Q	0.500	0.11	2.66	0.16	3.87	0.18	4.40	41
R	0.361	0.115	2.52	0.14	3.07	0.14	3.13	42
W	1.075	0.08	1.64	0.10	2.04	0.125	2.57	42
Samples below stored 10 months only								
1	10.130	0.22	4.56	..	..	0.23	4.90	28
2*	13.200	0.05†	1.13	..	..	0.07	1.60	17
3	10.940	0.095	2.00	..	..	0.11	2.35	40
4	1.016	0.05	1.20	..	..	0.06	1.46	42
5	1.115	0.07	1.93	..	..	0.08	2.26	41
6	10.327	0.12	4.00	..	..	0.11	3.74	37
7	1.809	0.075	2.46	..	..	0.07	2.36	39
8*	0.893*	0.02*	0.75	..	..	0.02*	0.77	50
9	0.321	...	...	..	..	...	...	61
G	0.391	0.005	0.12	0.01	0.23	0.02	0.44	63

* WVT data in grams/100 sq. in./24 hours at 100° F. and 90% R. H.
† Double wrapped.
NOTE: Numbered samples 1 to 9, incl.; storage slightly less than 10 months.

TABLE IV—LAMINATES

Sample	*WVT* before use*	*Gross loss, 12 mo.*		*Gross loss, 16 mo.*		*Net loss, 16 mo.*		*Taste test rating*
		Lbs.	*%*	*Lbs.*	*%*	*Lbs.*	*%*	
A	1.135	0.005	0.118	0.01	0.21	0.015	0.36	55
F	0.800	...	...	..	...	0.02	0.41	49
L	1.101	...	...	..	...	0.03	0.72	49
M	0.002	...	...	..	...	0.015	0.36	45
O	2.586	...	...	..	...	0.02	0.49	59
P	6.179	0.01	0.214	0.01	0.214	0.02	0.44	55
9	0.321	Stored 10 months only						61
G	0.391	0.005	0.12	0.01	0.23	0.02	0.47	63

* WVT data in grams/100 sq. in./24 hours at 100° F. and 90% R. H.

TABLE V—FILMS AND METAL FOILS

Sample	*WVT* before use*	*Gross loss, 12 mo.*		*Gross loss, 16 mo.*		*Net loss, 16 mo.*		*Taste test rating*
		Lbs.	*%*	*Lbs.*	*%*	*Lbs.*	*%*	
D	1.123	0.01	0.21	0.01	0.21	0.02	0.42	51
E	1.325	0.01	0.21	0.01	0.20	0.02	0.42	53
G	0.391	0.005	0.12	0.01	0.23	0.02	0.47	63
H	19.70	0.14	2.99	0.16	3.41	0.10	2.17	24
I	0.667	0.005	0.12	0.02	0.47	0.025	0.59	33
J	0.324	0.01	0.24	0.005	0.12	0.02	0.49	40
K	3.358	0.035	0.72	0.05	1.02	0.06	1.24	47
N	3.057	0.01	0.22	0.01	0.22	0.025	0.56	53
S	1.690	0.015	0.36	0.01	0.23	0.03	0.71	53
T	2.733	0.01	0.213	0.01	0.21	0.03	0.64	56
U	1.397	0.015	0.323	0.03	0.64	0.05	1.08	57
V	0.883	0.01	0.206	0.01	0.20	0.04	0.83	57
9	0.321	Stored 10 months only						61

* WVT data in grams/100 sq. in./24 hours at 100° F. and 90% R. H.

TABLE VI—IDENTIFICATION OF MATERIALS

Sample		*WVT**
A	Menasha cellophane and kraft paper lamination	1.135
B	Armour No. 2	1.515
C	Armour No. 1—waxed paper	1.505
D	Goodyear "Pliofilm" 260P8S	1.123
E	Goodyear "Pliofilm" 140P4	1.325
F	Kalamazoo Veg. Parch. (KVP) cellophane & pap. lam.	0.800
G	Catty du Pont cellophane 300 MSAT-83	0.391
H	Sutherland "Protectoid"	19.70
I	Aluminum Co. of America—"Alco Kitchen Roll"	0.667
J	Aluminum Co. of America—"Aluminum Foil .001"	0.324
K	Goodrich Rubber "Koroseal" XP2012 .0012"	3.358
L	Catty cellophane and parchment pap. lam.	1.101
M	Catty cellophane and aluminum foil lam.	0.002
N	Goodrich Rubber "Koroseal" XP2012 .002"	3.057
O	Goodrich Rubber "Koroseal" XP1757 pap. & Koroseal lam.	2.568
P	Goodrich Rubber "Koroseal" XP1783 pap. & Koroseal lam.	6.179
Q	West Carrollton Pap. Co. waxed brown locker pap.	0.500
R	Specialty Paper Co. waxed locker paper	0.361
S	Sylvania "Sylphrap" cellophane 300 PMFBS	1.690
T	Sylvania "Sylphrap" cellophane 300 PMFB2-CS	2.733
U	Sylvania "Sylphrap" cellophane 330 PMFC-SX	1.397
V	Sylvania "Sylphrap" cellophane 300 PMFR-PIC	0.883
W	Minerva waxed locker paper	1.076
1	Ordinary brown wrapping paper	10.13
2	Cutright waxed paper (Kitchen Roll)	13.2
3	Nepco tan locker paper	10.94
4	KVP white locker paper (waxed)	1.016
5	Triple-Tect white locker paper (waxed)	1.115
6	Nepco white locker paper	10.327
7	KVP tan locker paper (waxed)	1.809
8	Thilmany Green-White "Air-Lock" locker paper (double-wrap—waxed)	0.893
9	Du Pont 300 MSAT83 cellophane	0.321

* Grams/100 sq. in./day at 100° F. and 90% R. H. Sample taken before use.

Standard Test Methods

9. Moisture gain or loss (packages at 100° F.)

Definition

The gain or loss of the moisture of a packaged product is important in determining the preservation requirements of the product and the efficiency of the package.

Intent and scope

Most products contain some moisture, the increase or decrease of which can seriously affect the salability or usability of the product. This test procedure is designed to provide a means of evaluating package constructions against such moisture migration. The method is dependent upon change of weight of the product plus package and, therefore, not reliable or accurate for products which undergo extensive oxidation under the conditions of temperature or humidity or which have a large weight loss from volatile constituents.

Apparatus

Description—Temperature and humidity controlled atmospheres (either a room or a cabinet as in Fig. 1). For the evaluation of packages to carry products which are hygroscopic, the atmosphere shall be continuously controlled at 100 deg. ± 1 deg. F. and 90% ± 2% R.H. and under no circumstances shall condensation or liquid water come in contact with the packages under test. For packaged products which carry a large amount of moisture and which undergo moisture loss at normal conditions, the atmosphere shall be continuously controlled at 100 deg. ± 1 deg. F. and 32% ± 2% R.H. Each type of test equipment shall be designed so that sample packages are not exposed directly to rapid air movement. The equipment shall have shelves made of open mesh wire screen and shall be so laid out that packages will not come in contact with the walls or sides.

Reagents and accessories

A. Weighing means of suitable accuracy for the size and weight of packages under test. Sensitivity should be plus or minus one part in 10,000 of the gross weight of package and contents.

B. Anhydrous calcium chloride, approximately eight mesh.

C. For the maintenance of the specified humidities, certain salts may be used, depending upon the design and construction of the equipment. If it is intended to use such saturated salts as a means for controlling humidity, the following salts are recommended:

For 91% Relative Humidity at 100 deg. F. (PI-MC-1)—ammonium dyhydrogen phosphate.

For 32% Relative Humidity at 100 deg. F.—magnesium chloride.

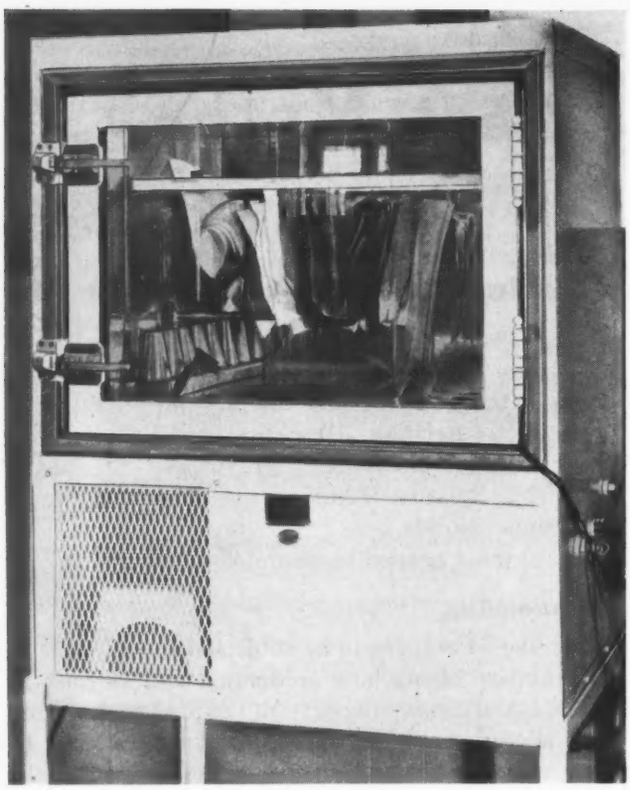
Both salts must be used as saturated salt solutions.

Test sampling

Sampling—Packages to be subjected to test shall be representative of machine production and at least 12 shall be taken consecutively from the final packing and filling operation. If hand-made samples are to be tested, a statement to this effect shall appear on the data sheet. Care must also be taken that the product is representative in moisture content, etc.

Complete details should be reported as to the time, machine number, batch number or all other pertinent information concerning the source of the package ma-

1. Medium-size cabinet that maintains controlled temperature and humidity for the testing of packages. The packages under test must not be permitted to be exposed directly to rapid air movement.



2. Small-size test cabinet, shown here conditioning several samples of packaging materials, may also be used for the testing of the finished packages.

terial, packages and product. There shall be at least 12 samples of each combination of package and product.

Any package which has adhesives containing water or volatile material used in its construction shall be held at room temperature for conditioning for at least 48 hours to complete the loss of volatiles and to develop the proper strength of the package.

Procedure

The filled sample packages are examined for obvious flaws and defects such as perforations, tears, improper closures or any other defects which are not normally found in the package material or are not normal to the finished package. Any excess of product or foreign material on the outside shall be carefully wiped or brushed from the surface and crevices, using a soft cloth or brush. It is desirable to allow any packages to stay at room temperatures for at least 48 hours to complete the drying of the adhesives, cooling of the product or in any other way come to normal conditions. Each package is then marked for identification, preferably with a wax pencil or crayon so as not to mar or otherwise degrade the package surface. The packages are then weighed, using a balance or other weighing means which should have a sensitivity of approximately $^{1}/_{10,000}$ gross weight of package and contents. This means that for a package carrying one pound or 453 grams of contents, the weighing means must be capable of weighing plus or minus 0.05 grams and the weights shall not be reported beyond the first decimal place. For example, 507.3 grams. The metric system is suggested as a basis of weighing since it simplifies weighing, calculations, etc. The packages shall then be placed in the test atmosphere and weighed at predetermined times until rate of weight change shows that the product is approaching equilibrium with the test atmosphere. Most products have a reasonably uniform rate of moisture change, at least for a limited time. It is desirable that at least four weighings take place during this time of constant rate, but in any case weighings should be made at not longer than one-week intervals. The progress of weight change can best be followed by graphically plotting the time versus weight change for the average of each group or of the one package which appears to represent the average. Even with very small weights of product in pouches with extended surface it is not desirable to perform a weighing operation oftener than once each 24 hours. Weighings may be made by rapidly removing the pouches from the test atmosphere in small groups, weighing and putting them back into the test atmosphere as soon as possible. It is, of course, possible to do the weighing operation in the test atmosphere, but in the case of a high humidity room this is extremely uncomfortable for the personnel involved. As the weighing is done, the packages should be examined for stain, discoloration or any other deteriorating effects which might occur from leakage of a portion of the product or by conditions of the test atmosphere. In the latter stages of the test where the weight change would indicate that deterioration could be taking place, one package must be opened and the conditions of the contents carefully described and reported. Whenever possible, tests should be continued to the time or weight change at which the product or the package has deteriorated beyond the point of salability or use, whichever is designated.

Remarks

The accelerated conditions described for this test are suitable for the evaluation of packages and products which are shipped, stored, handled and displayed exposed to the natural and ambient temperatures and humidities of the temperate and tropical zones. Special test procedures are necessary for the evaluation of packages to be used under frozen food storage conditions at 0 deg. F. or any other special and controlled atmosphere. It is not possible to correlate the test results from this procedure with the length of time of storage in any area or locality. The test provides a means of measuring the relative protective qualities of packages but if anhydrous calcium chloride is used in the place of a specific product, the test results can be used as standards for evaluating other packages at any other time.

Cycling of the temperature and humidity—that is, controlling and changing of temperature and humidity to provide positive breathing action through the package—is not necessary for evaluation of the moisture-proofness of containers. Cycling equipment is complicated and expensive and un- (*Continued on page 214*)

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This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Anti-perspirant packaging

QUESTION: We are anxious to ascertain if there is any satisfactory coating or impregnation process which may be applied to box paper or to the set-up box itself which would make it moistureproof and more or less resistant to an anti-perspirant block having both a water and aluminum sulphate content. If you can suggest any such process or coated paper, we would be most appreciative.

ANSWER: It appears that the following conditions outline the prime packaging requirements you seek:

1. The product has a liquid water content which will require the inside of the paper package to be completely lined with a waterproof lacquer or coating.
2. Somewhere in the package there should be an effective water-vapor barrier to prevent product drying.

You will find it impractical to make a paper package to meet these requirements, particularly for the long-term preservation of the product you are describing. Emulsions or damp products are best packaged in small glass jars because they are adversely affected by the loss of a small amount of water and because they must be opened and re-closed a great many times. A paper package would have to be impregnated after being set up and would have to be separately labeled or banded to be attractive. Then, too, the problem of preventing moisture loss through the closure would be difficult.

Finally, the cost of such a complex paper package would be out of line with satisfactory competitive types. A paper package might be developed for a large sized unit of your product for short-term or industrial use. However, for a small unit for consumer use a glass container with a screw cap appears to be ideal.

Protective wrap for biscuits

QUESTION: Due to very high humidity encountered in this country (New South Wales, Australia) we manufacturers of biscuits find the packaging of biscuits a difficult problem. The only 100% answer we have found to date is to wrap the biscuits, then immerse the packet in a plastic wax bath. This process is quite satisfactory for protecting the cookies against humidity but it means the biscuits cannot be seen. Now we were wondering if there is any transparent commercial dipping substance? The idea we have in the back of our minds is to wrap in cellophane and dip in a transparent "wax" or plastic. Moistureproof cellophane is just useless; Pliofilm is good, but we believe there is no 100% effective seal unless dipped. Alternatively we thought we could save a wrapper by having the dipped wrap printed, the transparent plastic allowing this, whereas at present we have to overwrap the dipped packets with a printed wrapper.

ANSWER: You apparently feel that the best solution to your problem is to use cellophane wrappers for your biscuits and then to dip them in a transparent wax or plastic bath for additional moisture protection. Unfortunately, there is no dipping material available which has the properties you desire and which is transparent. There are a great many lacquer formulations which make transparent coatings but it would be extremely difficult and hazardous for you to attempt to spray these over your wrapped product and attempt to dry off the solvents, etc.

A possible solution is use of a laminated cellophane. This material consists of two moistureproof cellophanes between which is a laminant of a waxy nature and which can be made to be quite transparent. The resulting structure is extremely strong, has a very high resistance to penetration by water (*Continued on page 216*)

APOLOGIES TO MR. WINK

Through one of those unaccountable typographical errors, for which there can be no explanation but only mortified apology, the name of the author of the article "Moisture Equilibrium" in last month's Technical Section was given as "Willmer A. Funk." The name is Willmer A. Wink. We hope that the many technical men who are familiar with Mr. Wink's outstanding work at The Institute of Paper Chemistry will have recognized the error and identified the author correctly; to the others we offer this explanation and apology. Reprints of the article—with the correct by-line—are available to those who wish them.

Davison dehydrated packaging for industry

WHEREVER MOISTURE DAMAGE (RUST, CORROSION, MILDEW AND MOLD) IS A HAZARD

CONSULT DAVISON REPRESENTATIVES

PROTEK-SORB* Silica gel
PROTEK-COAT†
PROTEK SEAL†
*Reg. U. S. Pat. Off.
†Reg. App. for

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE 3, MARYLAND

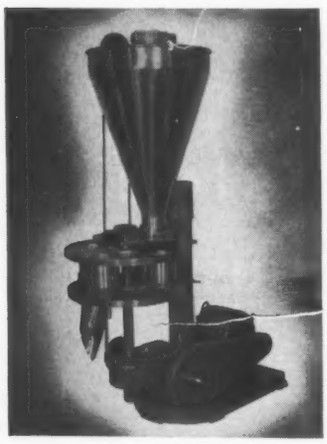
*Reg. U.S. Pat. Off.

Canadian Exclusive Sales Agents for PROTEK-SORB silica gel • CANADIAN INDUSTRIES LIMITED • General Chemicals Division

Equipment and Materials

IMPROVED FILLING MACHINE

The new improved Whiz-Packer filling machine, made by Frazier & Son, Belleville, N. J., of which there are several models, fills all types of containers having a capacity from a fraction of 1 oz. to 5 lbs. and is now available with interchangeable parts.



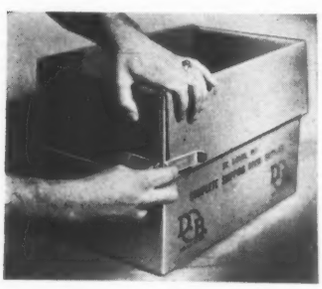
In addition, the company has also announced a completely new machine, the Model B4-(illustrated), which features 5-in. diameter cups, having a minimum volume of 8 cu. in. and a maximum volume of 300 cu. in. This machine will fill containers up to 10 lbs. The Whiz-Packer will fill from 12 to 48 containers per minute and does not require a skilled operator since there is only one operating leverfor starting and stopping run. Said to be accurate within $^1/_{32}$ to $^1/_{16}$ oz., it is equipped with a weight adjustment feature which offers the precision of a net weight machine yet gives the high-filling speed of a volumetric filler, according to the manufacturers. The machine is portable, weighing from 100 to 125 lbs., with over-all dimensions of 13 in. wide by 28 in. deep by 38 in. high. Features of the improved models are: a totally enclosed driving mechanism; all working parts operate in a bath of oil and provisions have been made for perfect alignment of the cups with the discharge openings without any adjustment. Company reports it is in a position to make immediate delivery.

"SELF-DESTROYING" LABEL

A one-time-use, self-destroying label has been added to the line of self-adhesive Kum-Kleen labels made by Avery Adhesive Label Corp., Pasadena, Calif. Designed especially for trade-marks, underwriter's approval and similar factory-applied data, these pressure-sensitive labels are die-cut so that they can be removed only in segments, thereby making it impossible to re-affix them on similar or substitute merchandise. The die-marks are invisible, the makers report, and in no way affect the design of the label. Like all Kum-Kleens, they peel off easily without leaving a mark, yet will not pop or curl off and may be applied to metal, plastic, wood, glass or cellophane. They are not affected by heat, cold or humidity.

TOOL SPEEDS PACKING OPERATIONS

The Diagraph-Bradley Stencil Machine Corp., St. Louis, offers a patented device, known as the "D.-B. Speed Packer," which speeds up the packing and unpacking of shipping containers.



Made of cadmium-plated, cold-rolled steel, this right-angle clip has two prongs projecting from its inner surface, one at either end. These prongs act as teeth to hold the Speed Packer in place when it is snapped onto a carton.

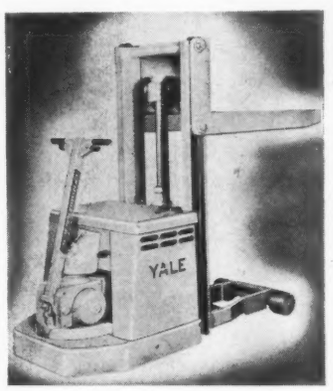
To use, the operator simply pushes two flaps of a carton down, snaps on the tool, pushes the other two flaps down and snaps on another Speed Packer. In this manner, all four flaps of the carton are held down against the sides—out of the way—so that the carton may be quickly packed or unpacked, without any lost motions. When the container is completely packed or unpacked, the Speed Packers may be flipped off instantly with the pressure of the operator's thumb.

DECALS FOR POLYETHYLENE FILM

Special decalcomanias for use on polyethylene film have been developed by The O. Austin Co., Brooklyn, N. Y. This company announces it is in a position to print directly on polyethylene film, in either flat or finished form. It further states that it has perfected a method of direct printing on curved or odd-shaped containers by silk screen and press.

MATERIALS HANDLING EQUIPMENT

Prompted by the wide acceptance of the electrically-powered hand truck, the Yale & Towne Mfg. Co., Philadelphia, Pa., has engineered a new piece of materials handling equipment which permits the load to be lifted to considerable heights from the floor. Known as the High-Lift Platform Model, it fills a need for equipment midway between the simple hand truck and the complete heavy duty high-lift platform truck. Used for purposes of stacking and picking up loads, the operator merely "strolls and steers."



Two models are available—one with a platform which can get under a 7 in. skid and hoist it to a height of 66 in., the other with a platform which can get under an 11 in. skid and lift it to a height of 70 in. Both models have a lifting capacity of 4,000 lbs. The units are said to be highly maneuverable—they can turn a right angle within 91 in., needing only 54 in. aisles and can swing within a circle of 95 in. radius.

Some features of the new truck are: independent motors for lifting and driving; automatic braking in the event of dropped handles or neutral positions of the driving controls; manipulation by finger-tip controls located immediately beneath the hand bar grip; two forward and two reverse speeds; extra-sturdy design; hydraulic release-checks to cushion descents and drive controls which automatically return to neutral when finger pressure is released.

HIGH-SPEED MARKING DEVICE

Latest addition to the line of marking equipment made by Adolph Gottscho, Inc., New York, is the manually operated "Rolamarker." This lightweight unit is designed to save time wherever multiple marking of flat or irregular surfaces is to be performed. It marks any surface with one quick motion, making clean, sharp impressions in only half the space required by stencil markers, it is said. The unit may be used for marking names and addresses, or other shipping information on cases, cartons, bags or boxes, as well as products made of plastics, metal, wood, paper and textiles. Changes (*Continued on page 212*)

THE ROSS WAY IS THE NEW WAY

Control Dial No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				
½ OZ. SIZE		21½	25¼	25¼	24½	20½	13½	11¼	14½	8½	19¼	16¼	14¾	11	4½	24½	27½	21	12¾	17¾	27½					
¾ OZ. SIZE		20¾	20¼	25¾	19½	15¼	17	14½	9¾	9¾	14¾	16	12	13¼	8¼	15	26	18¾	12½	16	26½					
1 OZ. SIZE		19¾	22	27	22¼	16	16½	13½	9	10¾	13¾	15¾	9	13¼	10¼	17½	25¾	15¾	9¼	12¼	24½					
2 OZ. SIZE		13½	14¼	28	13½	6½	24¼	21¼	3¼	8¾	7½	16¼	4¼	12	17	10	24¾	10	3¾	5¾	18					
2½ OZ. SIZE		9¾	10	29	9¾	3½	28	25¼	−1¾	8	3¾	15¾	½	12	20	6	23¾	6¾	½	3½	14½					

Note: Blank spaces left for any additional carton that might be added to the range. No. 1 adjustment is for the carton magazine. The magazine adjustment is made by putting the carton into the magazine and adjusting angles to suit. All other adjustments are made by setting dial control adjustments by number to point indicated on scale. Additional sizes can be run between minimum and maximum range of machine by making the proper dial settings and recording.

This fully automatic ROSS Cartoning Machine is designed to handle any number of size cartons within this machine's range.

A change to another size carton can be made within ten minutes—without the substitution or addition of interchangeable parts.

The ROSS machine inserts bottle and literature and is available for handling:

1. Straight tuck or reverse tuck cartons
2. Seal-end cartons
3. Top tuck, sealed bottom cartons

PRECISION PARTS • DIAL CONTROL • MASTER SPEEDRANGER •
SELF OILING • HIGH PRODUCTION • VERSATILE ADJUSTABILITY

Packaging Exposition Booth #62

ROSS
ROCKWELL
SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY
A. H. ROSS & Co. Inc.
PACKAGING MACHINERY · LUDLOW, KY.

A. H. Ross Co., Inc., Ludlow, Ky. 2

Gentlemen: Please send me without obligation, Catalog and Data on ROSS Automatic and Semi-automatic Cartoning Machines.

COMPANY_____

NAME_____

CITY_____ STATE_____

Plants and People

Owens-Illinois Glass Co., Toledo, announces that its purchase of **American Coating Mills, Inc.,** Elkhart and Chicago, has been given approval by the boards of directors of both companies. The sale of the business has also been approved by the stockholders of **American Coating Mills.**

American Coating Mills will be operated as an independent division, according to **W. E. Levis,** chairman of the board of **Owens-Illinois.** He also announced that **R. L. Snideman,** president and general manager of **American Coating Mills,** will be in charge of the division's operations and become a vice president and member of the board of **Owens-Illinois.**

The annual sales volume of **American Coating Mills** is placed at over $6,000,000.

The Dobeckmun Co., Cleveland, has established a market planning division to handle market testing and sales planning of newly developed products. **John M. Cowan,** formerly sales promotion manager, heads the new division and **Alan D. Crowley** becomes sales promotion manager. The new division parallels the active sales operating division and will work in close cooperation with **Dobeckmun's** technical and production staffs.

John M. Cowan

Alan D. Crowley

William F. Grupe has been elected chairman of the board and treasurer of **Peerless Roll Leaf Co., Inc.,** Union City, N. J., makers of hot stamping foils and stamping presses. Other directors elected are **C. A. Lydecker,** president and general manager; **Stuart H. Swallow,** vice president and director of sales; **Fred W. Shepheard, Jr.,** secretary and comptroller, and **J. Raymond Tiffany,** general counsel.

Ball Brothers Co., Muncie, Ind., has acquired a glass manufacturing plant at Millville, N. J. It operates as **Friedrich & Dimmock, Inc.,** and is headed by **E. Arthur Ball,** vice president of **Ball Brothers.**

H. H. Guettrich has been made assistant general manager and sales manager for **The Aridor Co.,** Chicago, closure division of **Ball Brothers.**

William Ralph Voss has been made manager of the bakery division of **Milprint, Inc.,** Milwaukee. In this capacity he will consult and advise on all types of bakery packaging and assist in bakery merchandising and promotional campaigns. Previously **Mr. Voss** was associated with **W. E. Long Co.,** wholesale bakery consultants, and the **Dawn Donut Co., Jackson,** Mich., where he was the sales manager and a partner.

Wm. Ralph Voss

Fritz G. Lanham, former congressman from Texas whose trademark bill became a law in 1946, has opened a Washington office where he will conduct an advisory service on patent and trademark matters.

H & J Meyer Co., consultant in transparent packaging, has merged with **Dubonnet Products Co.,** Brooklyn. **Dubonnet** will continue custom fabrication of transparent and colored acetate boxes, packages and displays.

Ralph A. Ostberg has been elected director, president and general manager of **Edward Ermold Co.,** manufacturers of labeling machinery. Mr. Ostberg has resigned from partnership in the firm of Rogers & Slade, management consultants. The **Ermold** company is located at 652 Hudson St., New York.

Ralph A. Ostberg

Joseph A. Quigley, formerly vice president and general manager of In-tag division of **Interchemical Corp.,** gravure ink manufacturers, has been elected president, succeeding **Earl H. McLeod.** **William B. Warner,** vice president, succeeds **Charles C. Hasely** as Western manager. **Mr. McLeod** and **Mr. Hasely** continue to serve in an advisory capacity.

Industrial Commodity Corp., New York, has announced the appointment of **Frederick L. Thomsen** as director of marketing and prices and **Richard J. Foote** as director of commodity research. **Dr. Thomsen,** formerly head of the **Division of Marketing and Transportation Research, U. S. Dept. of Agriculture's Bureau of Agricultural Economics,** was the author of "Whither Pre-Packaging," published in the November, 1946, issue of MODERN PACKAGING.

Kimberly-Clark Corp., Neenah, Wisc., has announced three appointments in its sales research and engineering division: **Leonard E. Pasek** as senior product engineer and **Mark W. Keyes** and **Starkie L. Swenson** as product engineers.

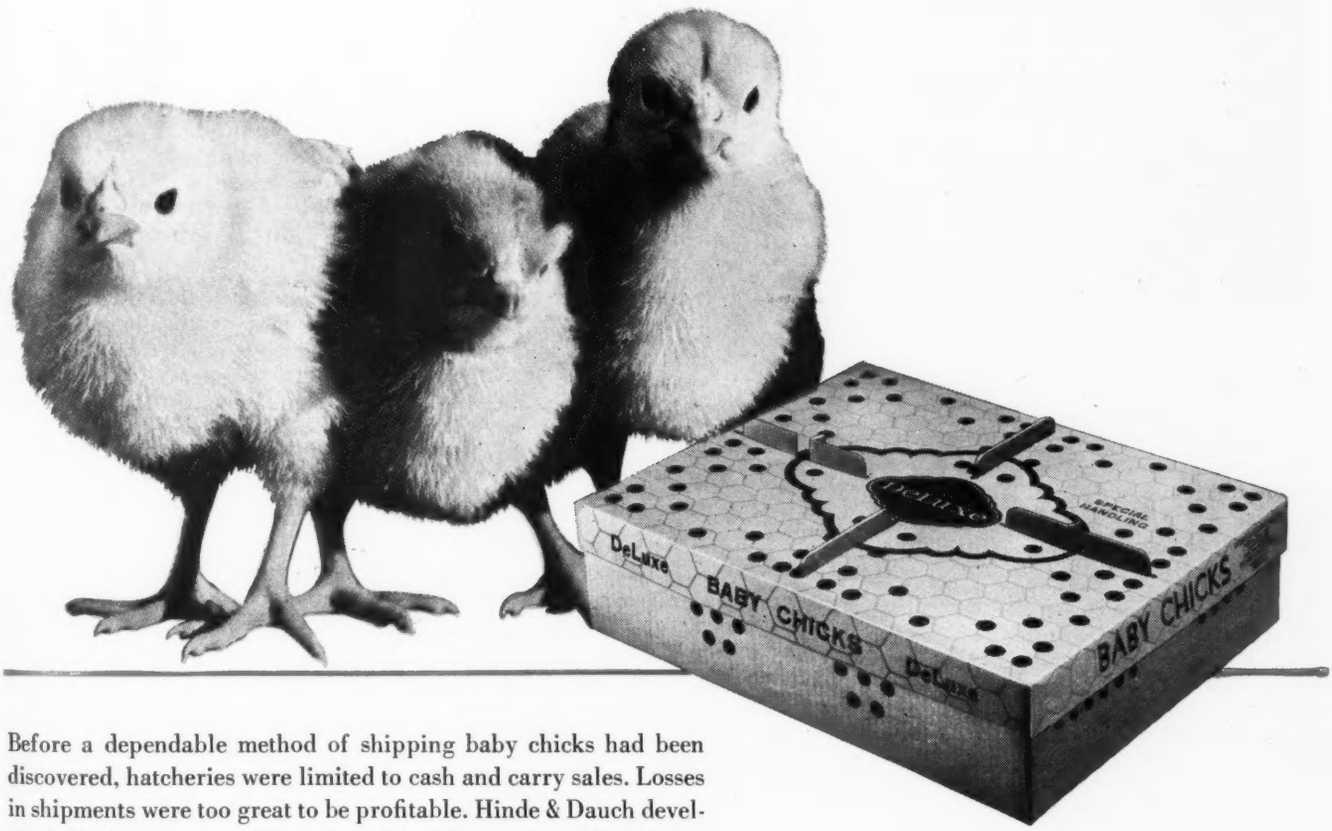
Kendall D. Doble has succeeded his father as president of **Pneumatic Scale Corp., Ltd.,** N. Quincy, Mass., manufacturers of packaging and bottling machinery. Founder **William H. Doble** is now chairman of the board. Other appointments announced are those of **F. C. Drinkwater,** former plant superintendent, as manager of service and installation and **L. F. Blackwell,** who was manager of the bottling division, as plant manager.

Kendall D. Doble

William H. Walters, first vice president and director of the **U. S. Printing & Lithograph Co.,** has been named chairman of the graphic arts division of the **Legal Aid Society's** 1947 appeal for funds.

Continental Can Co., Inc., has acquired the net assets of the **Hummel-Ross Fibre Corp.,** manufacturers of Fourdrinier and cylinder kraft sulphate paper and liner board. The mill will supply raw materials for fibre drum and barrel manufacture in the Van Wert, Ohio, and Reading, Pa., plants of **The Container Co.,** Continental's subsidiary. **Fred E. Hummel,** president of **Hummel-Ross,** will (*Continued on page 202*)

first to develop a corrugated box for BABY CHICKS



Before a dependable method of shipping baby chicks had been discovered, hatcheries were limited to cash and carry sales. Losses in shipments were too great to be profitable. Hinde & Dauch developed the first corrugated box for chicks. Response was immediate and sales rapidly increased. Today, hatcherymen ship day-old chicks across the continent in H & D chick boxes . . . *with little or no loss*. Many hatcherymen guarantee 100% "live delivery."

Hinde & Dauch's "firsts" in corrugated packaging have also aided the canned food, chinaware and glassware industries . . . the paint, furniture and allied trades. And, as other H & D "firsts" are developed, industry will continue to benefit through lower packaging and shipping costs, reduced loss from damage in transit, and from greater sales and economy in distribution. The Hinde & Dauch Paper Company, 4702 Decatur Street, Sandusky, Ohio.

LOOK TO

H&D

FOR PACKAGING "firsts"

HINDE & DAUCH · *Authority on Packaging*

FACTORIES IN: Baltimore 13, Maryland • Buffalo 6, N. Y. • Chicago 32, Illinois • Cleveland 2, Ohio • Detroit 27, Michigan • Gloucester, N. J. • Hoboken, N. J. Kansas City 19, Kansas • Lenoir, N. C. • Montreal, Quebec • Richmond 12, Virginia • St. Louis 15, Missouri • Sandusky, Ohio • Toronto, Ontario • Watertown 72, Mass.

Plants and People

(*Continued from page 200*) serve in an advisory capacity in the new set-up and **John W. Sales** will remain general manager of **Hummel-Ross.**

President **Louis Calder** of **Perkins-Goodwin Co.,** wholesalers of pulp and paper, recently marked his 50th anniversary with the company.

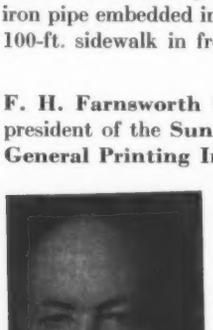
R. D. McAusland

R. D. McAusland has been elected a vice president of **Bemis Bro. Bag Co.** Since 1936 he has been a director and was appointed Pacific Coast general manager in 1941. He will direct West Coast operations for the Bemis firm from Seattle.

General Electric Co.'s chemical department has established a plastics division and a compound division, supplanting the former plastics divisions. **George P. Lehmann** will manage the plastics division and **Nathan A. Freuden** has been named sales manager.

A new office building for the **Heekin Can Co.,** Cincinnati, Ohio, features a radiant heating system in a 16-ft. outer "band" of the floor adjacent to the outside walls and a snow-melting system of wrought iron pipe embedded in the concrete of the 100-ft. sidewalk in front of the building.

F. H. Farnsworth has been appointed president of the **Sun Chemical Corp.'s General Printing Ink Div.,** succeeding **John F. Devine,** who is now assistant to the president of the corporation. Assisting **Mr. Farnsworth** are divisional vice presidents **Harold A. Kernell,** who handles sales operations and policy in the Midwest, and **Walter Huber,** who has a similar position in the East. **Mr. Farnsworth** retains his former position as general manager of the **Sigmund Ullman Div.** of **Sun Chemical.**



F. H. Farnsworth

The **War Assets Administration** has sold to the **Dow Chemical Co.** the government polystyrene plant at Velasco, Texas. The acquisition gives **Dow** a capacity in excess of 200,000,000 lbs. of polystyrene annually. The company has also purchased the lime, chlorine and power facilities of the Velasco magnesium plant.

Dow has also announced several personnel changes in supervision of plastics sales: **Frank L. Brown** supervises the Eastern region; **Gage Olcott,** the New York office; **Joseph E. Russell,** the Midwestern region and **Floyd J. Gunn,** the Chicago office.

Irving L. Holtz

Irving L. Holtz has returned to **National Can Corp.** as district sales manager. His headquarters will be in New York. During the war **Mr. Holtz** served as **National Can's** priorities director. He has been associated with the firm for 17 years.

Island Equipment Corp., New York, designer and manufacturer of unitized spot conveying equipment, has opened a branch office at 2631 Woodward Ave., Detroit. **Denny Bohn** has been placed in charge of the office.

Robert S. Solinsky, president of **Cans, Inc.,** Chicago, has been elected president of the **Can Mfgrs. Institute** for 1947. He replaces **George A. Milton.** Officers re-elected for 1947 include **H. Ferris White,** executive vice president, **Clifford E. Sifton,** secretary and treasurer, and **Gordon Cole,** advertising director for the Institute.

Robert S. Solinsky

Cliff Slusser has been named vice president and general manager of **Goodyear Tire & Rubber Co's.** subsidiaries operating domestic textile plants and coal mines. Succeeding him as vice president in charge of production and a member of the board is **Russell DeYoung,** formerly vice president and general manager of the **Goodyear Aircraft Corp.** subsidiary. **Fred W. Climer** has been elected to a new vice presidency at **Goodyear** in charge of personnel and labor relations.

Three men have been added to the Pliofilm sales force: **P. N. Dexter** in Boston, **Thoralf Magnusun** in New York and **Willy Boudry** in Los Angeles.

H. C. Bristoll has been appointed general manager of **The Stanley Works Steel Strapping Div.,** New Britain, Conn. **Mr. Bristoll,** previous to his new assignment, was sales manager of the Steel Strapping Div. for 19 years. He is a member of the **Industrial Packaging Engineers Assn. of America** and of **The American Pulp & Paper Mill Superintendents Assn.**

H. C. Bristoll

The National Dehydrators Assn., holding its annual meeting in Chicago recently elected a new board of directors. **Joseph B. Pardieck,** of **California Vegetable Concentrates,** Huntington Park, Calif., was chosen president and **George E. Siebel,** of **Little & Co., Inc.,** Chicago, vice president.

Alfred A. Halden has been elected executive vice president of **National Starch Products, Inc.** He had been vice president in charge of manufacturing since 1942. **Arthur L. Pulfrey** is now director of personnel relations and **Robert A. Bintz** succeeds **Mr. Pulfrey** as superintendent of the Dunellen, N. J., plant of **National Starch Products.**

Alfred A. Halden

Zophar Mills, Inc., Brooklyn, producers of wax and chemical products, are celebrating their 101st anniversary this year.

Wood Conversion Co., St. Paul, Minn., has announced the election of **E. W. Davis,** formerly executive vice president, as president, and **D. M. Pattie,** formerly general sales manager, as vice president and general manager.

The **Union Paste Co.,** Hyde Park, Mass., has announced the following appointments: **Herbert W. Kelley** as president, **A. B. Crowell,** (*Continued on page 220*)

CHOOSE Wood FOR PACKAGING

Gain ★★ BEAUTY ★ DESIGN QUALITY ★ INDIVIDUALITY

Inspiration comes easily to the design of a package in wood. Wood in itself is a material of beauty through all its life, from the pristine magnificence of a forest tree to its end result in the finely grained charm of a wooden cabinet. Wood in packaging—plus the artistry born of Pilliod's half-century of experience—spells added appeal for finer products.

We are booked up solid for the balance of 1947, but when the present rush is over, we will welcome the opportunity to contact new accounts and discuss merchandising and packaging problems.

THE FINEST PACKAGES GROW ON **TREES**

THE **PILLIOD** CABINET COMPANY SWANTON, OHIO

For Your Information

The American Standards Assn. recently made public its revised list of 864 standards approved for national use of industry. Included are definitions of technical terms, specifications for metals and other materials, methods of work and test for finished products and standards dealing with public and industrial safety, industrial medicine and a variety of consumer goods. The list is available to the public at the association's headquarters, 70 East 45th St., New York 17.

National Adhesives has issued a new edition of "Successful Can Labeling," fully revised to include postwar techniques and materials. Copies may be obtained from the firm, 270 Madison Ave., New York.

The Art Directors Club will hold its 26th annual national exhibition of advertising and editorial art from April 25 to June 1 in New York's Metropolitan Museum. **Juke Goodman,** art director of **Saks Fifth Avenue,** is chairman of the showing.

Sherman Paper Products Corp. has just published its spring and summer display guide. Designed to aid the retailer in providing ideas for display backgrounds and accessories, the booklet is available from the firm, Newton Upper Falls 64, Mass.

Food Machinery Corp. has recently published a new general catalogue, No. 800, which may be obtained by writing to the **Sprague-Sells Division** of the corporation at Hoopeston, Ill.

The Assn. of American Railroads has recently issued "Progress Report on Glued Unit Loading System." Carefully detailed and illustrated, the report may be obtained without charge by writing **National Adhesives,** Dept. RR, 270 Madison Ave., New York.

National officers of the **American Designers' Institute** were elected at the recent annual meeting of the board of trustees. **Alexander J. Kostellow,** of New York, will serve as president; **Ruth Gerth,** San Francisco, and **Stewart Pike,** Philadelphia, vice presidents; **Ann Franke,** New York, secretary, and **Lionel C. Algoren,** Chicago, treasurer.

A labor relations seminar will highlight the annual meeting of the **Folding Paper Box Assn. of America,** March 25 to 27, at Chicago's Drake Hotel. General sessions will concentrate on internal problems of the folding box industry and will feature speakers from the trade. The winners of the association's 1947 box competition will be displayed.

The Chicago Professional Paper Group sponsored a panel discussion on "Printing Methods and Printing Machine Design" at its February meeting. Members of the panel were **Paul Twyman,** of the **Miehle Printing Press and Mfg. Co.; Reynolds P. Perry,** of **Harris-Seybold Co.,** and **Leonard J. Remington,** of **Champlain Co., Inc.**

Hunter College, New York, is now offering a new evening course in industrial design with emphasis on packaging, conducted by designer **Jacques Martial.**

McGraw-Hill has just published "Principles of Color and Color Mixing," by **J. H. Bustanoby.** The book retails for $4.50.

Secretary of Commerce **W. Averell Harriman** has announced that the **Divisions of Simplified Practice and Trade Standards,** transferred to the **U. S. Dept. of Commerce** in 1946, will be retained by the **National Bureau of Standards.**

What's doing

March 16–22—**National Assn. of Frozen Food Packers,** exposition and annual meeting, Hotel St. Francis, San Francisco.

March 25–27—**Folding Paper Box Assn.,** annual meeting, Drake Hotel, Chicago.

March 31–April 4—**Frozen Food Institute,** annual convention, Boston: education congress, Copley Plaza Hotel; frozen foods equipment and trade show, Horticultural Hall.

April 7—**Packaging Machinery Mfgrs. Institute,** semi-annual meeting, Hotel Warwick, Philadelphia.

April 8–11—**Sixteenth Annual Packaging Exposition and Conference,** sponsored by the **American Management Assn.,** Convention Hall, Philadelphia.

April 10—**Packaging Institute** dinner, Hotel Warwick, Philadelphia.

April 10–11—**Tri-State Packers Assn.,** spring meeting, Lord Baltimore Hotel, Baltimore.

April 14–17—**Second Southern Machinery and Metals Exposition and Industrial Forum,** Municipal Auditorium, Atlanta.

April 21–23—**National Wholesale Druggists Assn.,** Palmer House, Chicago.

April 28–30—**American Pharmaceutical Mfgrs. Assn.,** Boca Raton Club, Boca Raton, Fla.

April 29–May 1—**1947 Industrial Packaging & Materials Handling Exposition,** sponsored by **Industrial Packaging Engineers Assn. of America,** Hotel Sherman, Chicago.

Scheduled for the annual convention of the **National Assn. of Frozen Food Packers,** convening March 21 in San Francisco's Civic Auditorium, is an address by **Packaging Institute President Mason Rogers** on "Trends in Frozen Foods Packaging."

Interested firms may now receive the "Plastics Bulletin," devoted to new developments and applications in plastics, published by **E. I. du Pont de Nemours & Co.'s Plastics Department,** Wilmington, Del. by writing the firm.

Several new members of the **Packaging Institute** are announced: **Kupfer Brothers Paper Co.,** Chicago, represented by **Heinz H. Loeffler,** president; **Paper Shipping Sack Mfgrs. Assn.,** New York, represented by **Frank Pocta,** secretary-treasurer, and **L. T. Swallow Associates,** Detroit, represented by **L. T. Swallow,** president. **PI's** directors have also made several appointments: **Herbert H. Leonard, American Machine & Foundry Co.,** is 1947 finance committee chairman; **W. O. Brewer, Calco Chemical Co.,** is chairman of the ninth annual program committee and **A. F. Stevenson, The Borden Co.,** is membership committee chairman.

Prince Matchabelli has received the *Beauty Fashion* magazine Packaging Award of 1946 for its **Crown Jewel** package, the faceted block of Lucite in which is suspended the famous gold-encrusted crown bottle, designed by **J. P. Sawyer,** New York, and engineered and produced by **Industrial Conversions,** New York. (See MODERN PACKAGING, Sept., 1946, P. 98.)

Speed WITH PRECISION

Today one machine makes three times as many cans in a minute as a man formerly made in a day—and they are better cans.

Crown Personalized Service has kept pace with the precision of production. Buy Crown Cans and you buy cans plus this service.

CROWN CAN

THE NATION'S THIRD LARGE SOURCE OF SUPPLY

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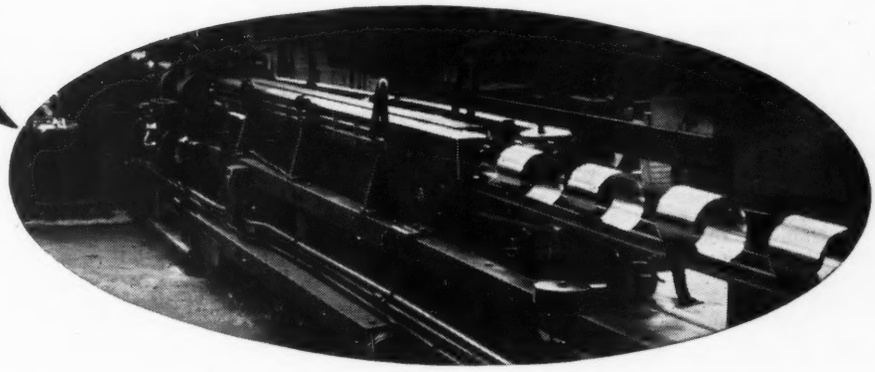


U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Combined Bottle Carrier and Carton, J. K. Darragh and H. E. Rue (to Pabst Brewing Co., Chicago, Ill.). U. S. 2,413,-315, Dec. 31. A combined bottle carrier and carton comprising an outer case having side and end walls, a removable bottle partition filler slidably fitted in said case including a central partition wall and laterally extending wings, said wings being parallel with the walls of the case and engaging the inner faces of said end walls, the wings and central partition having notches open at their upper ends at the points of juncture of the wings with the central partition.

Reversible Nozzle for Shipping Containers, G. H. W. Doose, New Orleans La. U. S. 2,413,438, Dec. 31. A shipping and dispensing container comprising a body having a projecting threaded neck, a tapered nozzle, a threaded cap having a central opening and removably threaded onto said neck with the nozzle projecting into the body, said nozzle having its larger end rigidly attached to the cap in communication with said opening and arranged so that the skirt portion of the cap surrounds the larger end portion of the nozzle, and provided with a tubular adapter having a threaded smaller portion to removably screw onto said neck.

Container Closure, W. C. Kesler and V. A. Ryan (to Crown Cork & Seal Co., Baltimore, Md.). U. S. 2,413,453, Dec. 31. A cap having a cushion liner formed of a mixture of about 15 to 25% kraft pulp and about 85 to 75% waste news pulp, said liner having a thickness of between about 0.049 in. and 0.063 in., and an apparent density between substantially 0.019 and 0.027 lb. per sq. yd. per point of thickness.

Baling Means, S. D. Russell (to J. I. Case Co., Racine, Wisc.). U. S. 2,413,522, Dec. 31. In a baler, the combination of a baling chamber, a plunger therein, means for feeding material to be baled into the chamber for compression by said plunger, spaced slotter adapted to be inserted at intervals into the chamber for separating the resulting bales and a punch rigidly mounted on said plunger positioned to penetrate the material being baled at a position between said spaced slotters.

Method of Packaging Cellulosic Pads, C. A. Fourness and K. J. Harwood (to International Cellucotton Products Co., a corporation of Delaware). U. S. 2,413,-556, Dec. 31. The method of packaging a multi-ply, previously compressed and expanded, creped, cellulosic pad, which comprises the steps of recompressing the pad in a lengthwise direction while maintaining the width and thickness of the pad substantially uniform, restraining the recompressed pad against longitudinal expansion or buckle while a sleeve member having longitudinal and peripheral dimensions substantially equal to the equivalent dimensions of the recompressed pad is placed about said recompressed pad and then applying a close fitting, outer covering including a sleeve portion to the combination of said pad and sleeve so that said outer covering extends at right angles to said first mentioned sleeve.

Infusion Package with Handle and the Method of Manufacturing Same, L. Barnett (to Millie Patent Holding Co., a corporation of New York). U. S. 2,413,-686, Jan. 7. In a method of making an infusion bag package formed with a closure portion, the steps of heat sealing a marginal area of said closure portion to form a border flange, through-splitting a substantial continuous length of said flange short of complete severance while retaining said sealed closure intact to provide an integral handle when only a portion thereof is displaced from the plane of said flange for suspending said package by said handle during brewing.

Container, F. Lobl, Middleboro, Mass. U. S. 2,413,721, Jan. 7. A container having two wall portions movable relatively toward and from each other, one of said wall portions having a mouth opening therein and the other having a projecting plug thereon for seating in said opening, mechanical sealing means around said mouth and plug interiorly of the container, a lip extending around said mouth opening exteriorly of the container and resilient tubular means on said plug inserted through said mouth opening, resiliently engaged in sealing relation over said lip and blazing said interior sealing means into co-acting sealing relation.

Cold Cream Jar, C. C. Morrison (to F. N. Burt Co., Inc., Buffalo, N. Y.). U. S. 2,413,726, Jan. 7. A container, including in combination, an inner receptacle made of a glassy material, a supporting and protective casing of a fibrous cushioning material in which said receptacle is telescoped into protected and supported position, a retaining bead on the outer surface of said inner receptacle and spaced inwardly from the upper and lower extremities of said receptacle and extending circumferentially thereof, said retaining bead having under surface portions thereof upwardly and outwardly inclined providing a wedge surface and having an abrupt crest engaging with a pressure fit against the inner surface of said casing.

Milk Carton Provided with a Cream Chamber and a Valve for Controlling an Opening Between the Milk Chamber and the Cream Chamber, A. Read, Portland, Ore. U. S. 2,413,845, Jan. 7. A milk container consisting of a carton having top, bottom and side walls, a cream chamber having top and side walls and an apertured bottom wall, said cream chamber being disposed within said milk container, an apertured disc in rotatable wiping contact with the underside of the bottom wall of said cream chamber, a tubular element having a flange at its upper end and bearing against the underside of the top wall of said cream container and its opposite end bearing against the top side of the bottom wall of the cream container, a core rotatably mounted within said tubular element and having its lower end flanged and secured to said apertured rotatable disc, the opposite end of the core being bored to receive a squared projection of an actuating knob disposed above the top wall of the milk container.

Convertible Packing Box, C. K. Keath (to Frick-Gallagher Mfg. Co., Wellston, Ohio), Lititz, Pa. U. S. 2,413,874, Jan. 7. A box having utility as a shipping case or dispensing cabinet, comprising side, bottom and end walls, said end walls each having a pair of rectangular reinforcing frames consisting of a side, top and bottom rails and an intermediate channel member secured to the inner face thereof, the said top rails having an inset shoulder to provide a countersunk cover recess in cooperation with said side walls, a cover adapted to fit in said recess to close the box and, when removed, adapted for insertion in said channel member to provide a shelf.

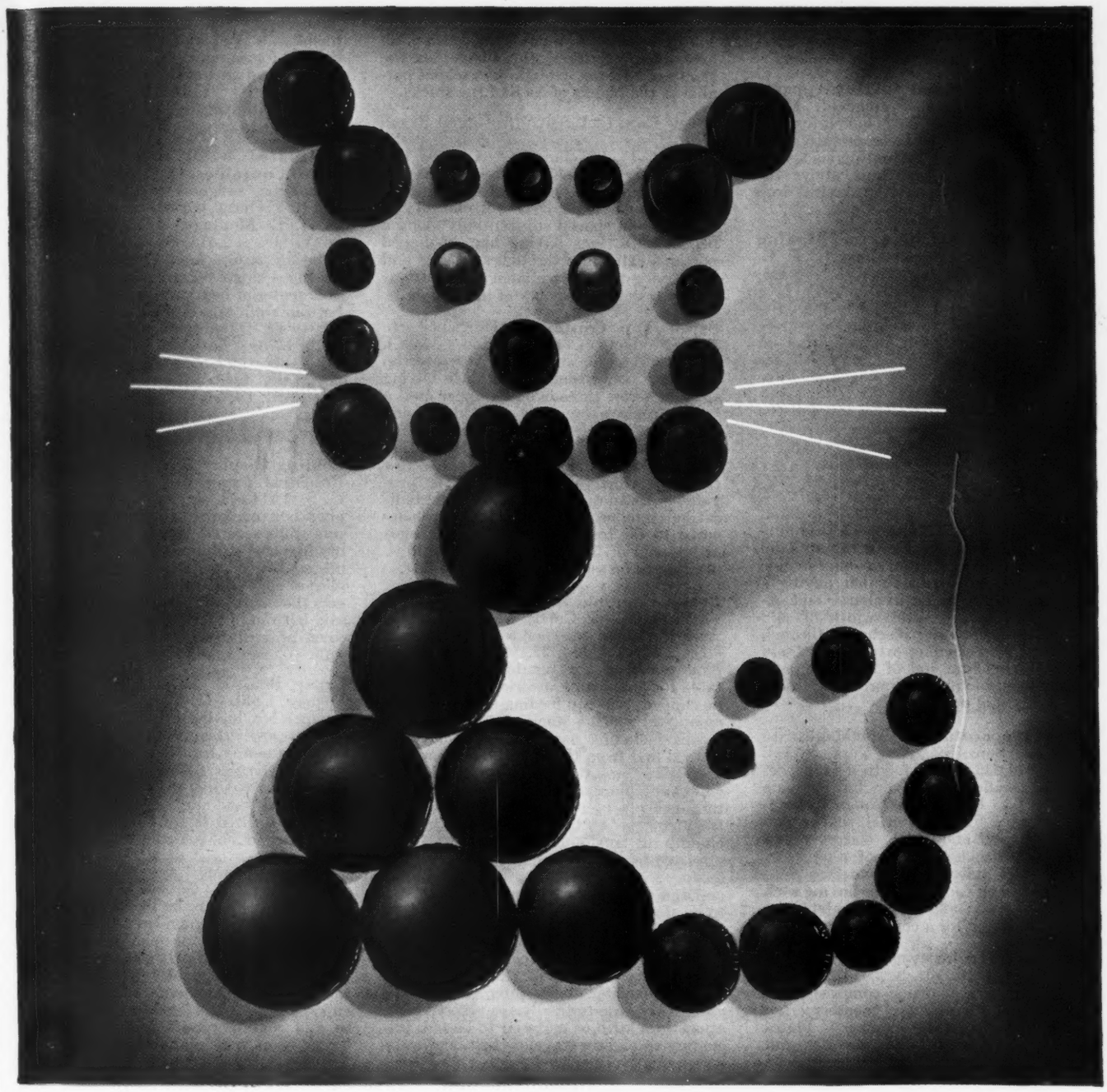
Foldable Bottom Collapsible Egg Case, C. G. L. Montgomery, Colorado Springs, Colo. U. S. 2,413,774, Jan. 7. In a collapsible case for eggs and the like having a fixed side section including inwardly projecting bottom and end members, a foldable bottom member hinged to the bottom member of the fixed section and adapted to fold upwardly within the case and curved spring rods slidably mounted on the inside of the end members.

Can Dumping Mechanism, C. H. Abbott, Astoria, Ore. U. S. 2,413,900, Jan. 7. A can-dumping machine comprising a pivotally mounted cradle, a vertically swingable normally lowered arm mounted near said cradle, a one-way connection from said arm to said cradle for tilting the latter to a predetermined can-dumping position when said arm is moved from said normally lowered position to a predetermined raised position.

Powder Box, F. M. Kackley and J. Whitman (said Whitman assigned to said Kackley, Faversham, Eng.). U. S. 2,413,-923, Jan. 7. A box comprising a bottom, sides, a top having an opening therein giving access to the interior of the box and means for closing said opening, said means comprising a sliding cover and a second flexible cover underlying said sliding cover when in closed position and bendable means connecting one end of said flexible cover to the opposite end of said sliding cover for causing said flexible cover to be initially flexed and thereafter moved to open position through said opening by movement of cover to open position.

Stripping Machine, L. E. Shaner (to Box Blank Corp., New York, N. Y.). U. S. 2,413,999, Jan. 7. A machine for removing from blanks precut from a sheet of cardboard, paperboard and the like, a scrap adhering to said blanks, comprising a movable die plate for receiving sheets of board, said die plate having apertures therein, means for forcing blanks through said apertures, means for engaging said scrap while the blanks are being forced through the die plate apertures.

Picker Mechanism, S. T. Carter (to Economic Machinery Co., Worcester, Mass.) U. S. 2,414,019, Jan. 7. A labeling machine which includes a label magazine, label-picking means movable toward and from the magazine and operative to withdraw the exposed label from the magazine, said picking means comprising a pair of picker elements movable toward and from each other in the same plane,



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means for applying adhesive to the picker elements, a transfer pad operative to receive the label from the picker elements.

Bunch Forming and Spacing Apparatus, L. J. Powers, Springfield, Mass. U. S. 2,414,059, Jan. 7. A bunch forming and spacing apparatus comprising a delivery belt arranged for continuous travel, a generally stationary chute above the belt to receive and guide the vertical drop of successive sheets.

Method and Machine for Making Blanks, C. D. Knowlton and G. F. C. Burke (to Heague Sprague Corp., Lynn, Mass.). U. S. 2,414,109, Jan. 14. In a machine for making a box blank having end-wings and corner-laps, oppositely disposed sets of knives for operating on opposite sides of the blank, each set comprising a knife for trimming the outer edge of a corner-lap and a knife for forming a slot between the corner-lap and the adjacent end-wing, a single adjusting means for moving said sets of knives simultaneously together and apart.

Needle for Filling Receptacles, R. E. Bruckner (to Kimble Glass Co., Vineland, N. J.). U. S. 2,414,138, Jan. 14. A filling nozzle comprising a tube having an axial bore, said tube having an opening in side wall thereof, said tube further having a portion at its terminal discharge end extending across the entire width of said bore to prevent axial discharge through said bore, said opening extending to said terminal discharge end of the tube, said terminal end having no appreciable thickness below said opening.

Filling Apparatus, J. MacManus (to Cushman's Sons, Inc., New York, N. Y.). U. S. 2,414,235, Jan. 14. In a filling device, an endless conveyer for carrying containers to be filled, a trough for containing liquid filling material, said trough being disposed above said conveyer and extending transversely thereof, a plurality of chambers individually connected with said trough and each chamber having such capacity as to hold approximately the amount of liquid for a container.

Wrapping Machine, E. S. Wollett, Washington, D. C. U. S. 2,414,282, Jan. 14. A wrapping machine comprising, in combination: a slidable member; an arm pivoted on said member; plates pivotally carried by said member and said arm, respectively, in article spaced relation, for motion of separation of their lower edges about horizontal axes; pivot means mounting one of said plates for rotation on an axis perpendicular to its first named axis to accommodate an out-of-square article.

Combined Container and Tape Dispenser for Tape, G. Schieman (to International Plastic Corp., Morristown, N. J.). U. S. 2,414,333, Jan. 14. A combined carton and dispenser for housing and dispensing pressure-sensitive adhesive tape comprising a single sheet of paper material so cut and folded as to provide side walls and end members with integral tongues extending inwardly towards each other from the side member for rotatably mounting of a roll of pressure-sensitive adhesive tape between the side members.

Partition Assembling Machine Elements, A. F. Shields (to S. & S. Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y.). U. S. 2,414,336, Jan. 14. An apparatus for assembling partitions from a plurality of notched blanks, comprising means for positioning one set of stacks of blanks and an opposite set of stacks of blanks, the sets of stacks of blanks being spaced from each other by the width of an assembled partition, the blanks in the stacks of each set extending in planes parallel to the blanks of each of the stacks.

Screw Cap, C. J. Salvo (to United-Rexall Drug Co., a corporation of Delaware). U. S. 2,414,395, Jan. 14. A screw cap comprising a cup-shaped member having a cylindrical wall, said wall including an inner annular layer having a plurality of slits, therein spaced substantially along a helical path, lugs having hairpin-shaped portions extending through said slits and oppositely directed coplanar pad portions engaging outer periphery of inner layer.

Screw Top Container, H. Sebell (to Bell Products Corp., Boston, Mass.). U. S. 2,414,420, Jan. 14. A screw top container comprising a container having exterior screw threads at its upper end, a cap for sealing the container body having a skirt portion provided with screw threads to fit those of the body, said skirt portion having skirt extension below the screw threads, which skirt extension is provided with an opening and a telltale indicating member of cardboard which is secured to the inside of the skirt extension at one end of the opening thereof and in position to be seen through the opening.

Bottle Capping Machine, A. H. Bedworth and L. G. Curtis, Medford, Mass. (said Bedworth assignor to said Curtis.). U. S. 2,414,434, Jan. 21. In a bottle capping machine, the combination with a table for supporting a series of bottles to be capped, of a cap feeding unit including a chute in which a stack of caps is placed, means including a suction cup movable toward and from the chute and by which a cap is removed from the stack in the chute and temporarily held at a predetermined position directly in the path of travel of the bottles and mechanism including a trip and wiper successively operated by the bottle as it passes the cap feeding unit for breaking suction in said cup and causing the cap presented by cup to be seated on the mouth of the bottle.

Pin Type Feeding Device, A. W. Metzner (to The Standard Register Co., Dayton, Ohio). U. S. 2,414,478, Jan. 21. A pin type feeding device progressively engageable in longitudinally spaced configurations in a strip of material to be fed, including an endless traveling belt, a plurality of relatively spaced feeding pins carried thereby and engageable in the configurations of the strip to be fed and a pulley about which the belt is directed.

Beverage Dispenser, F. F. Gunther (to Helmco, Inc., Chicago, Ill.). U. S. 2,414,-521, Jan. 21. In a liquid receiving assembly for controlling the temperature of liquid therein; a base member, a meter in said base, a central well having the form of an inverted cup upstanding from the upper part said base, a heating element housed in said well, a liquid receiving and dispensing container including a liquid confining side wall and a bottom formed to include a radially outer annular portion adapted to be seated on the upper part of said vase and a central inverted well adapted to receive in closely fitting relation the well in said base to afford transmission of heat to liquid in container.

Labeling Machine, G. W. vonHofe (to New Jersey Machine Corp., Hoboken, N. J.). U. S. 2,414,621, Jan. 21. A labeling machine comprising label applying means for supporting a label in an applying position, a supporting member slidably mounted in operative relation to said label support, a carrier secured to said member, a head slidably mounted on said carrier for supporting an article to be labeled and means to adjust the article on supporting head into yielding surface contact with the label on said label applying means to transfer label to article.

Ventilated Wood Reinforced Fibreboard Container, H. E. Montague, I. H. Montague, assignors to I. H. Montague and R. V. Harry, copartners doing business as H. E. Montague & Co., New York, N. Y. U. S. 2,414,659, Jan. 21. A combination receptacle and picking tray comprising a single rectangular sheet of foldable material bent transversely to form a bottom wall, opposite side walls and two top wall forming members, said side walls being relatively shallow and said top wall forming members being of a width materially greater than the depth of the side walls, the sheet material having two transversely extending rows of openings therethrough, each in a side wall.

Folding Display Box, N. Rosenthal (to Rosenthal Paper Co., St. Louis, Mo.). U. S. 2,414,671, Jan. 21. A folding display box comprising a bottom, two-ply side walls secured to said bottom, a two-ply free end wall having its outer ply connected to said bottom and to the outer plies of said side walls to form closed corners therewith, a hinge end wall secured to said bottom but free of said side walls and cover hingedly secured to said hinge end wall.

Paper Box, H. L. Snyder, West Los Angeles, Calif. U. S. 2,414,703, Jan. 21. a paper box having a bottom, sides foldable upwardly therefrom, means providing band extending from one side to encircle the other, ends foldable upwardly from the bottom against the outer faces of the ends of the band and infold sides attached to ends adapted to be positioned against the inner faces of the ends of the band.

Soap Container, E. K. Bludworth, Dallas, Tex. U. S. 2,414,711, Jan. 21. A box for soap, or the like, comprising a container, a lid for said container hinged to one side thereof for opening and closing movement, a raised platform in the bottom of the container relatively smaller than said container and centered therein for supporting a bar of soap, a tray fitting in said container, said tray fitting being larger than said platform and provided with an apertured bottom fitting around platform, forming an extension thereof.

Folding Paperboard Box, W. G. Palmer (to Bartgis Bros. Co., Ilchester, Md.). U. S. 2,414,763, Jan. 21. A folding box formed from a blank of cardboard comprising a bottom having a pair of upstanding side portions hingedly connected thereto, end portions connected by square corners to side portions and hingedly connected to said bottom.

Dispensing Package of Material to be Molded, G. W. Wacker (to Clearing Machine Corp., Chicago, Ill.). U. S. 2,414,-781, Jan. 21. An original package for material to be molded, comprising a container formed of collapsible material and entirely closed at both ends, a portion of one of said ends being weakened, whereby said portion is adapted to be ruptured by forcing the material which is in the container thereagainst, by external pressure applied to the opposite end of the container, the first said end of the container being provided with a closed laterally expansible tubular extension adapted to be laterally expanded by pressure of the material passing thereinto.

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Transparent containers

(*Continued from page 128*) creasing machines permit the lines to be set up for various levels of production, according to schedules, but the average is 20,000 units per day from all four lines.

Though standard shapes of packages have been automatized as far as possible, the company is as yet unable to adapt similar methods to specialty packages. These, including an average of 15 various shapes and sizes, are turned out on the same lines. Production is still largely hand work, however, with triangular, heart-shaped, bell-shaped and lozenge types formed on wooden block forms, glued and passed down the conveyor to girls who attach bottoms and lids. Here again, a half-dozen shapes and sizes of acetate packages may be manufactured at once.

The company continues to encourage odd-design custom work of this sort even though it necessitates large manufacturing crews and much hand work—on the theory that many packages now standard in the growing market for acetate boxes started out as "custom jobs."

Operating in conjunction with the regular production lines is a sample table where hand-made samples of proposed acetate boxes for many uses are turned out for submission to manufacturers.

By and large, the straight-line production lines, combined with new types of machinery built in the plant or bought outside, have made possible a tremendous production increase. It is a far cry from production methods of 10 years ago.

CREDITS: *"Showbox" transparent containers by Central States Paper & Bag Co., Showbox Division, St. Louis, Mo. Beading and creasing machines for rectangular containers by Taber Instrument Corp., Tonawanda, N. Y.*

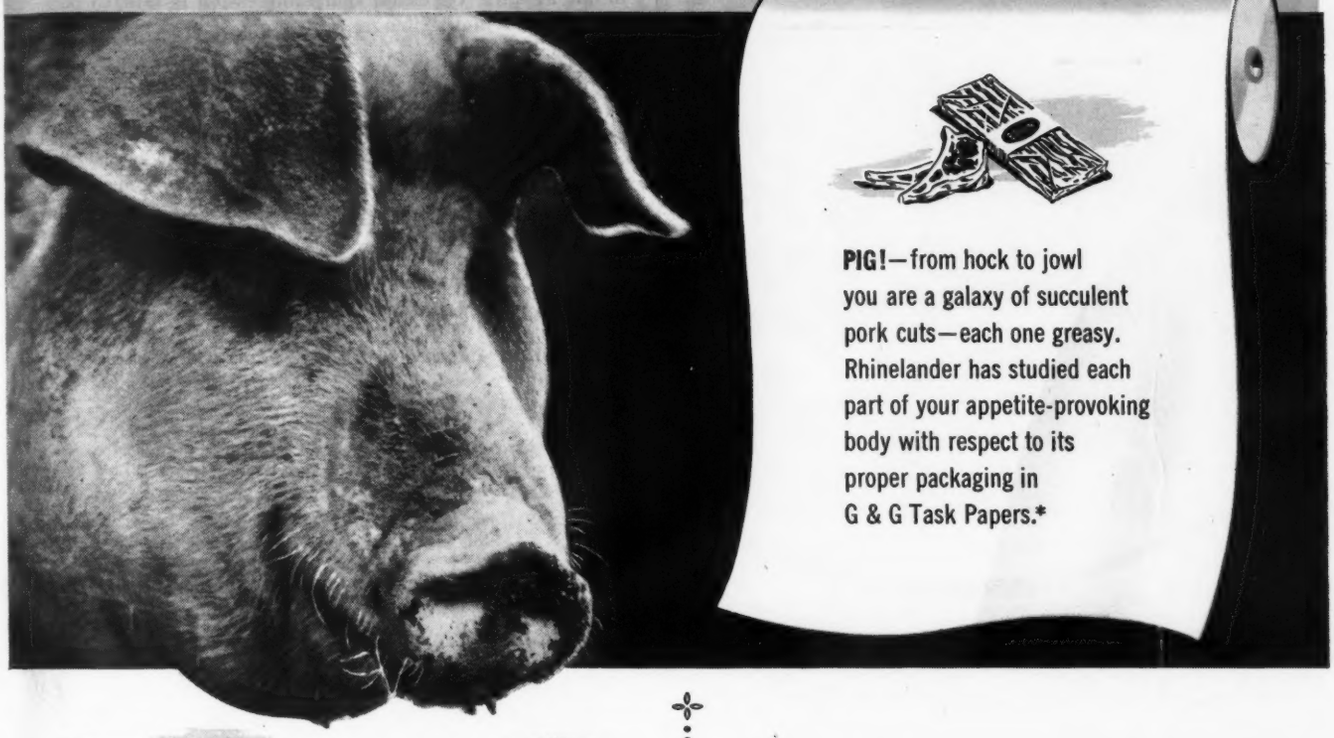
The Wirebound Institute

The Wirebound Box Manufacturers Assn. is about to launch an educational program to qualify its industry's personnel in overcoming the problems that will be presented by the forthcoming era of business competition and in winning new markets for its products.

The program will function under the title of "The Wirebound Institute," but will be an integral part of the W.B.M.A. The association's staff at Chicago, in collaboration with the Package Research Laboratory of Rockaway, N. J., will conduct the program. It will consist of 30 correspondence course lessons divided into three sections, plus a series of regional clinics. The three sections are entitled "The Design of Wirebound Boxes," "Testing the Performance of a Wirebound Box in the Laboratory" and "Quality Control As It Affects Wirebound Box Performance."

Enrollment is open to full-time, regular employees of wirebound manufacturing members of the association and to employees of wirebound machine manufacturers. Applicants must be endorsed by their employers.

STOP-Paper At Work!



PIG!—from hock to jowl you are a galaxy of succulent pork cuts—each one greasy. Rhinelander has studied each part of your appetite-provoking body with respect to its proper packaging in G & G Task Papers.*

Good Candy packaging calls for: greaseproofness, transparency (or bright opacity), moisture control, heat sealing, non-sticking, printability, smooth machine handling, beauty and color. Rhinelander G & G Task Papers* offer *these* at low cost.

Mm!—What Fragrant Soap! Costly scents escape unless properly retained. Glassine, with the most dense formation of all papers, is almost impermeable to air-borne odor, is ideally suited to fine soap packaging.

An Odd Job for us is packaging welding rods. These may cost many dollars per pound and they are perishable. Our protective paper that does this job must be good; indeed it is. Maybe *you* have a parallel problem.

**Glassine and Greaseproof—the functional papers that do so many tough jobs well*

Metal foils have a great future in packaging. Rhinelander G & G Task Papers* multiply foil's usefulness. Our wax laminations reinforce pinholes—stop fractures. Our lacquers make these fine sheets heat sealing.

An accident! First aid to the rescue! Mother does a professional job with those clever, ready-for-use bandages. Their sterility is insured by Rhinelander G & G Task Papers* which protect hundreds of medical and pharmaceutical items.

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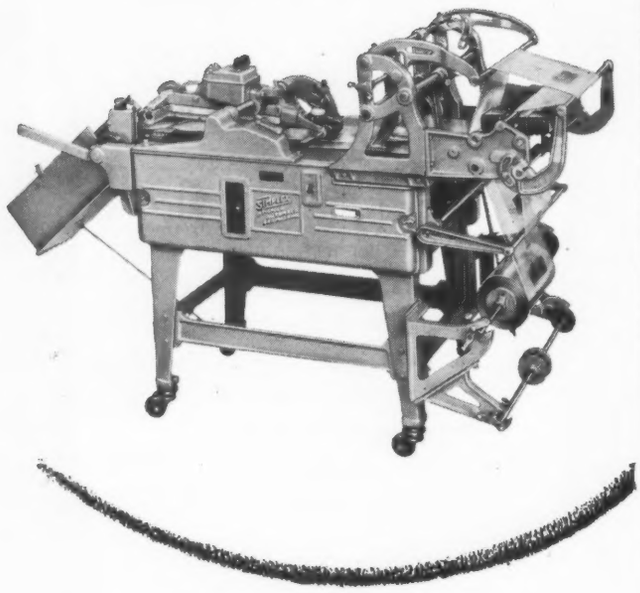

If you use any of the thermoplastic coated materials such as Cellophane, Pliofilm, Maralux, Diaphane or Laminated Sheets, buy your material in plain or printed rolls, and make your own bags right under your own roof, where you can exercise full control over quality, quantity and delivery, and substantially reduce your bag cost.

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Equipment & materials

(*Continued from page 198*) of imprint legends are made easily and quickly by means of interchangeable rubber type. Both type and type-holder have a patented ribbed-base construction which allows many sizes or styles of type to be combined in one legend. Its clean, sharp impression is said to permit a more distinct and legible imprint in only half the space required by stencil marks.

A unique feature of this marking unit is a self-return mechanism which automatically restores the printing surface to its original starting position after completing the imprint.

The Rolamarker is available in three sizes, the largest of which affords impressions up to 5 x 12 in. in area. It comes in a complete ready-to-use kit which includes type sets and fast-drying, indelible inks, designed for the specific surface on which it is to be used.

LAMINATED FOIL PAPERS

The Nashua Gummed & Coated Paper Co., Nashua, N. H., announces the availability of a wide range of laminated foils, plain or embossed for box coverings, display applications as well as labels and seals. The brilliance and color of these laminated foils offer an unlimited range of distinctive effects in the creation of packages with eye appeal.

AUTOMATIC CARTON GLUER

The new adjustable carton glue sealing machine, Model A-3901-12, to be exhibited at the forthcoming AMA Packaging Exposition in Philadelphia by the Container Equipment Corp., Newark, N. J., will incorporate the latest improvements and refinements in their line of CECO sealers. Two of the outstanding new features of this machine are: a circulating glue pump system which continuously supplies glue to the pots, keeping a constant level; and a "one-shot" lubricating system which reduces maintenance time and assures proper lubrication at all major points of the machine. Although the company will display only one model CECO adjustable carton glue sealing machine, there are also several other models available for smaller and larger carton size ranges.

ROTARY HEAT SEALER

A new principle in rotary bag heat-sealing has been introduced by the Heat Seal-It Co. of Philadelphia, in their new low-cost Roto-Seal-It machine. This machine carries each bag through four pressure points simultaneously where heat is applied. This, the makers announce, is the equivalent of traveling through four ordinary heat sealers at one time. The result is said to provide an increased production rate and at the same time an extra strong seal.

The sealer supports the bag at the bottom, while it travels through the machine without the use of belts, chains or other devices. This feature is said to effect three definite improvements: less wear and tear on the bag, easier and more rapid feeding and the elimination of the possibility of mechanical mis-alignment. It will seal bags of any width, is adjustable for different heights from 2 in. to 12 in. and is thermostatically controlled and easily portable. The machine comes complete with a sturdy tripod stand that can be easily moved about.

PRINTED LAMINATED TAPE

Laminated, pressure-sensitive printed labels, developed during the war by Topflight Tool Co., York, Pa., for marking aircraft parts is now available in roll form for marking, coding, trademarks and service instructions. The lamination—a layer of transparent tape—over the printed surface protects it from abrasion, water, oil, etc., while adding strength and sparkle. The rolls fit standard tape dispensers.

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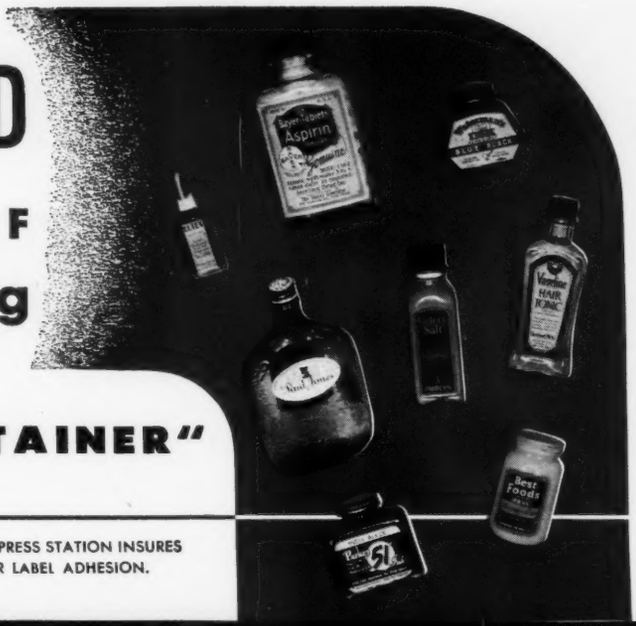
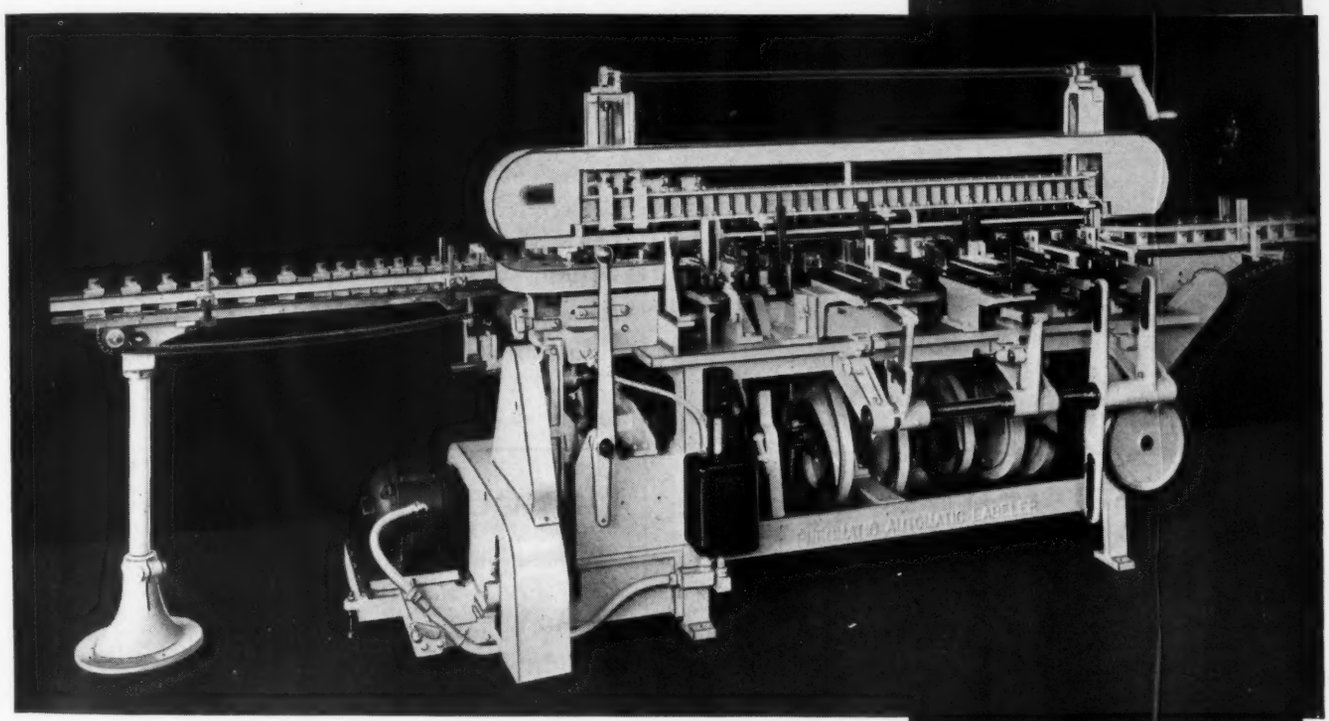


DIRECT TRANSFER OF LABEL TO CONTAINER.

CONTINUOUS STRAIGHT-THROUGH INTAKE ELIMINATES IMPACT AND SHOCK.

DOUBLE PRESS STATION INSURES ALL-OVER LABEL ADHESION.

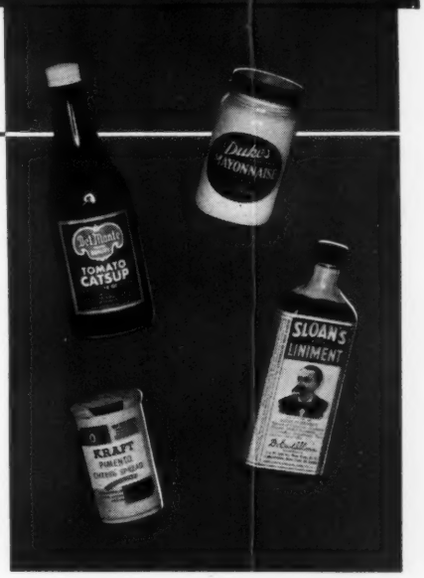


EASY ACCESS TO PARTS FOR CLEANING, LUBRICATING AND ADJUSTMENT.

POSITIVE CONTROL OF BOTTLES FROM START TO FINISH.

VARIABLE SPEED DRIVE IS STANDARD EQUIPMENT.

COMPLETE INTERCHANGEABILITY OF SPECIAL PARTS BETWEEN IDENTICAL PNEUMATIC LABELERS.

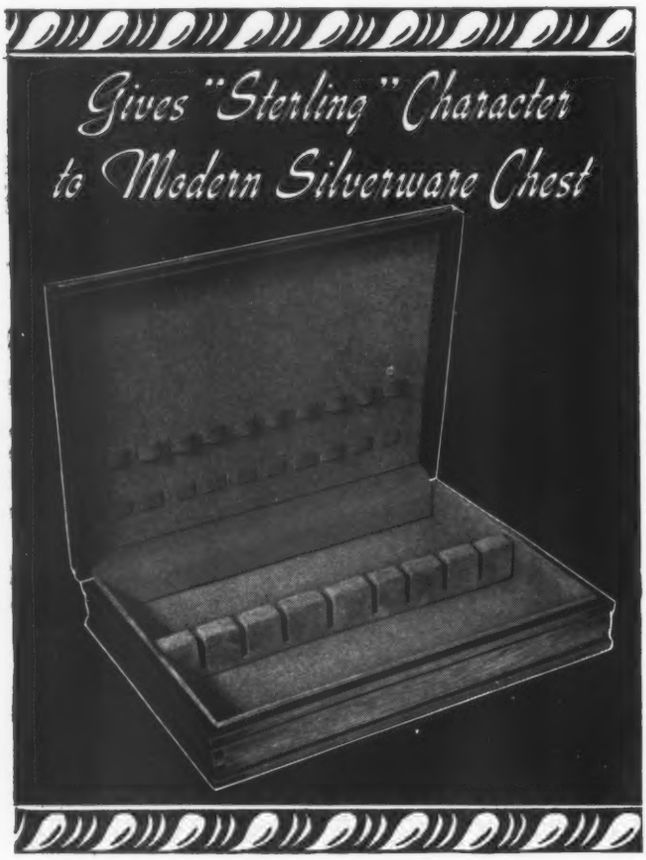


All the most effective and efficient time tested principles of automatic labeling are incorporated in this Pneumatic Duplex Labeler. Here is labeling brought to its very peak of perfection and precision by a company famed for its ability to build equipment that does the job better, and at a "lower cost per container". The list of leading companies who have selected Pneumatic labelers above all others and who are using this equipment with great satisfaction give testimony of its superiority. PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., North Quincy 71, Mass. : New York : San Francisco : Chicago : Los Angeles.

PNEUMATIC PACKAGING AND BOTTLING MACHINERY

Rayco Flock

Gives "Sterling" Character to Modern Silverware Chest



Produced for International Silver by Rock Mfg. Co., Stoughton, Mass., this Rayco-flocked chest is characteristic of the most modern design. The flock lining is royal blue and is specially processed so as to prevent tarnish. Among the numerous deluxe Synthetic Finishes produced with Rayco Flock are

VELVET • SUEDE • VELOUR • "SPANGLES"

WORKING SAMPLES FREE

Rayon Processing Co. of R. I., Inc.

PIONEER PRODUCERS OF SURFACE-COATING FLOCKS

110 Tremont St., Central Falls, R. I.

PI standards

(*Continued from page 194*) less properly used, with some limits on the number and intensity of the cycles, misleading results can be developed because of the distorted emphasis placed on the mechanical openings of the package.

Calculations

The weight change between each weighing is determined, averaged and plotted on graph paper for each group of packages.

Report

Results are reported as the average rate of change of moisture in grams based on the original weight of product, or as per cent based on the original weight of product. This report on rate of change shall be based upon the time intervals between weighings and over the time in which the change occurs at a reasonably uniform rate. The total weight change or the per cent of weight change based on the original weight at which the product becomes unusable or unsalable should also be reported. If any individual package in a group shows deviations from the average of less than 20%±, no deviation shall be reported. However, if package or packages exceed this deviation the maximum-minimum deviations from the averages shall then be reported.

References

Institute of Paper Chemistry Report No. 40, Feb. 15, 1945—"Equilibrium Relative Humidities Above Saturated Salt Solutions at Various Temperatures."

Canco plate allocation

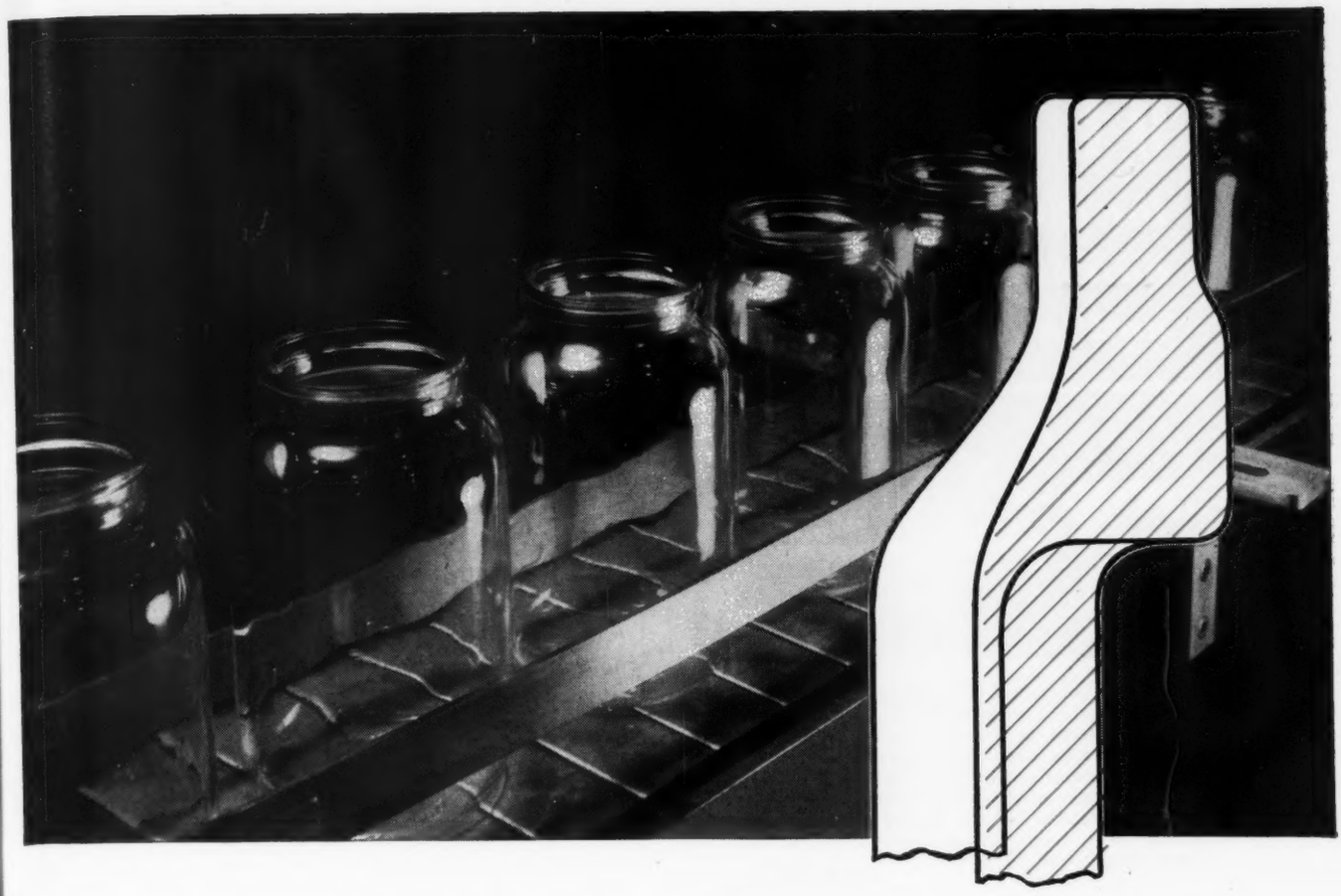
Announcement has been made by the American Can Co. that it will deliver metal containers at the rate of 85% of the base selected by each of its customers under the 1947 allocation plan it outlined to the trade in January.

The 85% ratio is based on all available information as to 1947 plate production, according to W. C. Stolk, vice president, and contemplates no interruption in receipts from suppliers, which would of course necessitate a reduction. Should production increase in the third and fourth quarters, as it is hoped, allocations will be increased accordingly.

In establishing this allocation, the company has selected that historical usage base which would result in the greatest advantage to each of its customers.

CORRECTION

MODERN PACKAGING regrets having created any impression that Parfums Schiaparelli, Inc., is using the Auto-Wrap method of packaging described in the article, "Bag Wrap," page 116-117 of our February issue. This erroneous impression may have been created inadvertently, due to misinformation concerning illustrative material supplied to us. Parfums Schiaparelli is not using the wrap.



HOW A CHANGE IN CONTOUR SOLVED A GLASSMAKING PROBLEM

Shortly after the glassmaking industry adopted standardized containers, one of our customers sent in an order for the new lightweight jars, specifying a long-established standard finish.

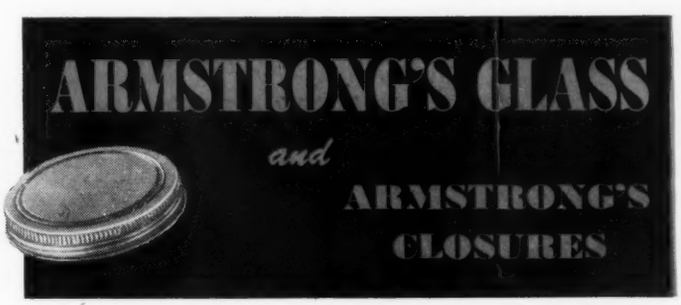
Using the new mold patterns approved by the industry, we set up our machines—started production—and ran smack into serious trouble. The wall of glass at the lip of the finish was just too heavy for the new lightweight jar. It cooled much slower than the lighter side wall of the container. When the glass forming machine was set at the proper speed to produce the body of the container, the finish was too hot and distorted in cooling. Using more air to cool the finish made the body too cold.

The only way to get usable jars was to run the machines at slower speed—and that was hardly practical, with customers all over the country anxious for more glass. Another style of finish might have solved the problem—but our customer had a large inventory of closures for this finish that he did not want to discard.

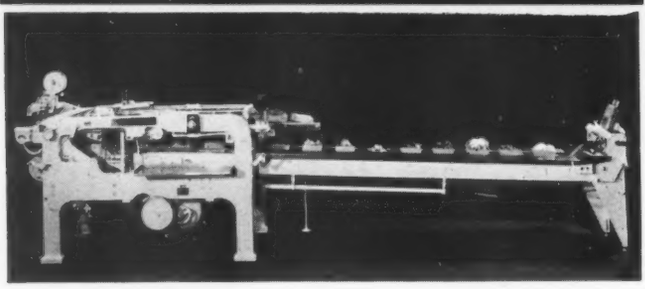
To solve the problem, we called together our production, bottle machine, and mold shop foremen and our mold and bottle designers. Together they worked out a new design for the finish, maintaining the standard outside diameter but reducing the wall thickness. The new design worked so well that it was eventually adopted as industry practice.

Not every glass packaging problem is so basic to the whole industry as this one was. But whatever your problem, you're sure of the best in technical advice when you bring it to Armstrong. An unusually large staff of experts in Engineering, Production and Package Design, Traffic, and the pure and applied sciences is constantly on the job to make sure you get the best possible glass and closure service.

For details on any of Armstrong's Glass or Closures, get in touch with your Armstrong representative, or write direct to Armstrong Cork Co., Glass and Closure Division, 6503 Prince St., Lancaster, Pa.



See "OLIVER"
for the latest in
automatic wrapping
and labelling



● "Oliver" Automatic Wrapping Machines—made in five different size ranges—wrap cartons, trays, odd-shaped items on U-boards or flat cards, using almost any type heat-sealing material. U-boards and cards are automatically fed and folded. A complete change for package size can be made in less than two minutes. Wrapper length can be adjusted with the machine in motion. Photo-electric registration of printed wrappers. *A girl can operate the "Oliver."*

● The revolutionary "Oliver" Automatic Roll-Type Thermoplastic Labelling System uses colorful diecut labels in a continuous roll. Essential information—title, price, quantity, code—can be imprinted just before the label is heat-sealed to the wrapper. Rolls of diecut labels are inexpensive, and easy to change. *Get all the facts!*

"Blank" label (reduced size) automatically imprinted with title quantity, price, and code.

1947 PACKAGING EXPOSITION
Philadelphia • *April 8 to 11*
Booth No. 205
Drop in and talk over your packaging and labelling problems with our representatives.

OLIVER MACHINERY COMPANY
Packaging Division Grand Rapids 2, Mich.

"Oliver" Wrapping Machine
WITH "OLIVER" AUTOMATIC ROLL-TYPE LABELLING SYSTEM

Questions & answers

(*Continued from page 196*) vapor and might be satisfactory for your needs. This material could be used as a wrapper or in the form of bags made up with one of the simpler type bottom constructions so as to be free of pinholes, etc. Preferably, the bottom should be made or supplemented by heat sealing. The closure could be made with a double fold and heat crimp.

Another possibility would be the use of a double or even triple wrapper of a moistureproof grade of cellophane, using your label between one of the plies. Either of these constructions would be much simpler and require less equipment and handling.

Another possibility would be a heat-sealed package of a heavy gauge or double ply of Pliofilm. It is also possible to get the moisture protection you require by the use of opaque materials such as the metal foils laminated to paper. Such a bag or wrapper made from a laminated $^{1}/_{1,000}$-in. foil, properly sealed and applied, would give you an extremely long shelf life.

Transparent wrapping at high speed

QUESTION: Can you tell me if there are any other transparent cellulose sheets that will perform similarly to cellophane on high-speed wrapping machines? In other words, are there any substitutes other than transparent wax sulphites or glassines?

ANSWER: Certain grades of glassine can be made transparent without further treatment, while special thin sulphites can be made transparent by impregnating with wax or resins. Surface treatments of lacquer on the glassine enhance its transparency and gloss and also improve its functional characteristics. However, similar treatments—that is, impregnations or coatings—when performed on other papers do not result in anything approaching the transparencies obtainable from glassine on these special sulphites. However, you might try some of the thin gauges of the transparent plastic films, some of which might do an effective job on high-speed wrapping equipment because of their strength and further might have functional properties which would protect your product.

Frozen food standards

INITIAL steps have been taken by the American Standards Assn. to set up a national committee of the frozen foods industry for cooperation in an international project for standardization in the frozen foods packaging field.

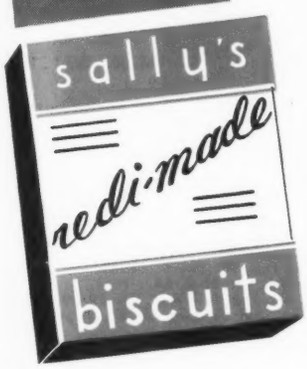
Arrangements are being made by Cyril Ainsworth, technical director of the association in charge of the project, to have nine trade organizations in the frozen foods field meet in New York during April for preliminary discussions on the proposed project. The meeting, which is preliminary to the gathering at Geneva in June of the International Organization for Standardization, will include all groups concerned with packaging.

IT'S **WESTERN** FOR

flavor-tight PACKAGING!

Western offers truly functional packaging that *assures* flavor freshness —overwraps and pouches that keep their contents as fresh and tasty as the day they were packed.

The extensive experience of our skilled packaging engineers, plus the best *flavor-tight* materials available, assure you of unexcelled packaging protection with real sales appeal.



LAMINATED AND COATED FOIL POUCHES

A highly protective material for safe, attractive packaging • Plain or distinctively printed pouches • Excellent for hygroscopic products • Moisture-vapor proof • Easily heat-sealed—positive closure • FLAVOR-TIGHT.

LAMINATED GLASSINE OVERWRAPS

Moisture-vapor proof • Protective overwraps preventing moisture gain or loss • Perfect for "hard to keep" powders and mixes • FLAVOR-TIGHT.

LAMINATED AND COATED GLASSINE POUCHES

Another highly protective material • Moisture-vapor proof • Grease-proof • Plain or attractively printed • Easily heat sealed—positive closure • FLAVOR-TIGHT.

FROZEN FOOD PACKAGING

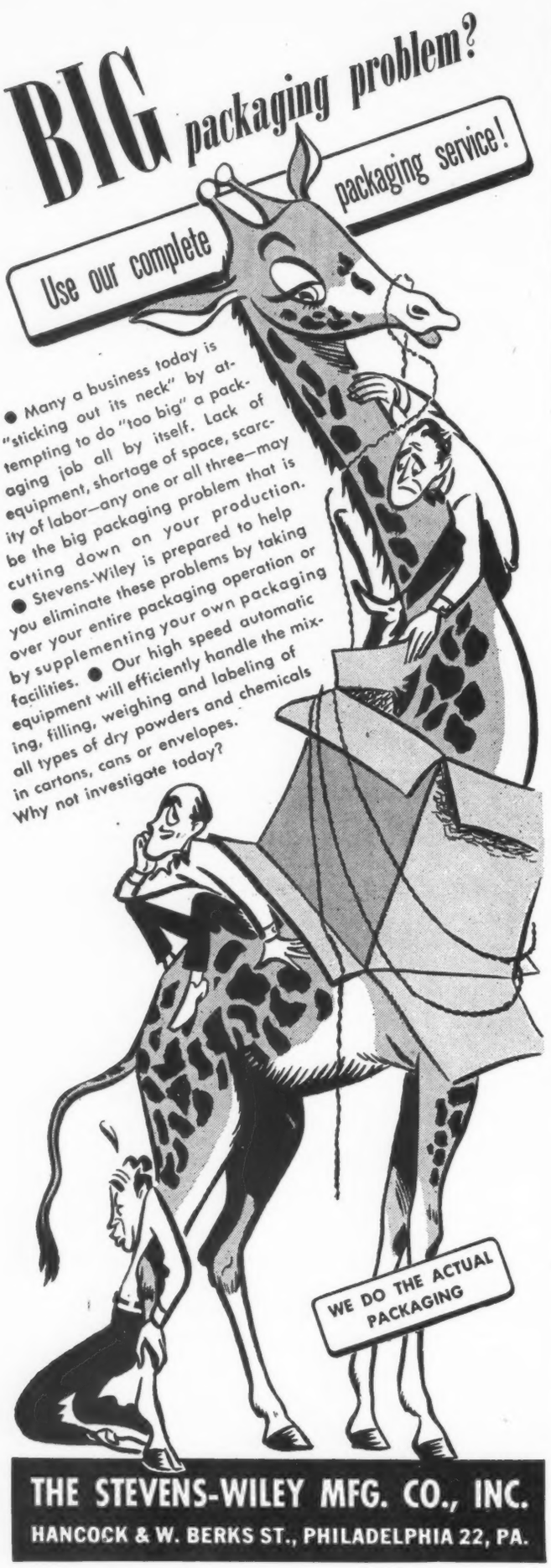
For frozen food application, Western also devises quality packages incorporating *liquid-tight* Pliofilm.

CONVERTERS OF LAMINATED AND COATED FOILS, TRANSPARENT FILMS, FABRICS AND PAPERS

WESTERN PRODUCTS INCORPORATED

Creative Engineering in Packaging and Plastics

NEWARK, OHIO


BIG packaging problem?
Use our complete packaging service!
● Many a business today is "sticking out its neck" by attempting to do "too big" a packaging job all by itself. Lack of equipment, shortage of space, scarcity of labor—any one or all three—may be the big packaging problem that is cutting down on your production. ● Stevens-Wiley is prepared to help you eliminate these problems by taking over your entire packaging operation or by supplementing your own packaging facilities. ● Our high speed automatic equipment will efficiently handle the mixing, filling, weighing and labeling of all types of dry powders and chemicals in cartons, cans or envelopes. Why not investigate today?
WE DO THE ACTUAL PACKAGING
THE STEVENS-WILEY MFG. CO., INC.
HANCOCK & W. BERKS ST., PHILADELPHIA 22, PA.

Mold control

(*Continued from page 187*) for phenyl mercuric compounds in cosmetics have been discussed (7) and this may serve as a guide in their incorporation into packaging materials.

Salicylanilide (Shirlan) is an effective fungicide for use with both fibrous materials and plastics (2, 4, 12, 17) and has been reported non-irritant to the skin (18) at concentration levels necessary for protection (0.2–0.5%). It is a colorless, odorless, non-volatile solid.

An interesting moldproofing agent which is applied to paper, cellophane, etc. as a coating has been developed by adsorbing silver on colloidal carbon and incorporating this in a plastic coating (10). The coatings are dark in color but provide a non-toxic, odorless, tasteless, mold-resistant surface.

Because of the variable nature of the results obtained in testing mold resistance, it is strongly recommended that a proposed treatment be thoroughly tested under conditions at least as severe as will be encountered in practice. Such properties as toxicity, skin irritation, odor and flavor should also be checked where applicable.

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New vacuum process

A new process said to combine agitated processing with vacuum packing, permitting an improvement in the color of the products and improving the flavor of vacuum-packed vegetables has been announced by American Can Co. food technologists. Comprehensive tests have shown, they said, that the new process results in greater retention of nutritive values of foods. Commercial practicality of the process was demonstrated during the 1946 canning season, when 25,000 cases of vegetables were so packed.

"BETTER PACKAGING MEANS BETTER SALES"

MR. CELLOPHANE

Here Sylvania Cellophane is used to improve a smart, new idea in packaging candy. The protective cellophane bag is placed inside the low-cost cardboard rocking horse whose gay color and whimsical expression have an immediate sales appeal.

Sylvania Cellophane has all the qualities needed to keep confectionery clean and sanitary. Every step in its manufacture is constantly checked. This careful control assures not only uniform transparency and a high degree of strength, but also provides a wrapper that won't stick to the contents—so important in packaging candy.

SYLVANIA CELLOPHANE

Made only by **SYLVANIA DIVISION**
AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
General Sales Office: 122 E. 42nd Street, New York 17, N. Y. *Plant:* Fredericksburg, Va.

SYLVANIA CELLOPHANE

Plants and people

(*Continued from page* 202) **Jr.,** vice president and treasurer, **F. P. Bartlett, Jr.,** technical director, **C. L. Crowell,** production manager, and **Morrison M. Bump,** sales and advertising manager.

Norton Co., Worcester, Mass., manufacturer of abrasives and precision grinding and lapping machinery, has purchased the assets of **The Oslund Bros. Machine Co., Inc. Norton** will continue to produce the **Oslund** labeling equipment for the food, beverage, cosmetic and drug industries.

St. Regis Paper Co. has formed a Mid-Atlantic sales district in its multiwall bag division. It will cover all of Pennsylvania with the exception of Philadelphia and will be headed by **Burton A. Ford,** vice president of the **St. Regis Sales Corp.** Headquarters are in Allentown.

H. A. S. Read, Inc., has been established at 119 Braintree St., Boston 34. The firm will design and make various types of custom- and hand-made containers.

George C. Sparks, packaging engineer for **Paper & Corrugated Specialties Div., D. L. Ward Co.,** Philadelphia, recently addressed the members of the **Graphic Arts Forum.**

Gerald Stahl, industrial and package designer, has moved from 101 Park Ave., New York, to 12 E. 46 St.

Alvey Conveyor Mfg. Co., St. Louis, has appointed **Mailler Searles, Inc.,** San Francisco and Los Angeles, as its general representative in the Pacific Coast states and the territories of Alaska and Hawaii.

Steiner Mfg. Co., display and industrial producers, have moved from 100 Metropolitan Ave., Brooklyn 11, to 47–30 33 St., Long Island City, N. Y.

The Sperry Corp., which recently acquired the **E. G. Staude Mfg. Co.** as a new division, announces that **Werner B. Thiele,** formerly vice president of the **Champlain Co.,** has joined the corporation as sales manager of **Graphic Arts Div. Arthur P. Bamford,** a leading designer of rotogravure printers, has been retained as chief engineer of the **Graphic Arts Div. Mr. Bamford** was formerly associated with the **Funk Printing Press Co.** and the **Chambon** and **Champlain** corporations.

Arkell & Smiths, Canajoharie, N. Y., manufacturers of paper bags and sacks, have announced the election of **Sheldon S. Yates** as chairman of the board and **Frederick E. Gross** as president.

Col. Charles S. Lawrence, commanding officer, **Quartermaster Food and Container Institute** for the Armed Forces in Chicago, has recently been awarded the Bronze Star medal with Oak Leaf Cluster in recognition of "outstanding and courageous action" against the Japanese during the siege of Bataan.

Dr. Roland P. Soule, vice president in charge of engineering and research for the **American Machine & Foundry Co.,** has been elected to the company's board of directors.

Nina Wolf has joined the **Elizabeth Arden Sales Corp.,** New York, an assistant in packaging design.

Lewis H. Durland, assistant treasurer at **Cornell University,** has been elected a member of the board of directors of the **Thatcher Glass Mfg. Co., Inc.,** Elmira, N. Y.

Willard Barnhart, II, director of purchases of **American Box Board Co.,** died at his home in Grand Rapids, Mich., on Feb. 6.

W. F. Kaynor, president and treasurer of **Waterbury Companies, Inc.,** plastic molders of Waterbury, Conn., died on February 23.

50 cents or

50 dollars

The product you market...

whatever its price, size or shape

...it will look better

and sell better in a

Showbox

Send us a sample of your product. Our Package Planning Group will custom-design a rigid, transparent, plastic Showbox for it.

If your product has eye-appeal, it belongs in a Showbox

SHOWBOX

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Division of CENTRAL STATES PAPER & BAG CO.

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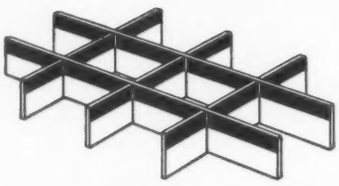
FOR BETTER PACKAGING



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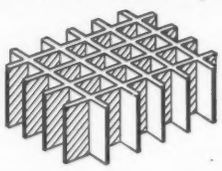

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IPEAA program

The subject "Build Shipping Profits from Shipping Problems" has been announced as the theme for the second annual Industrial Packaging and Materials Handling Exposition, to be held at the Sherman Hotel, Chicago, April 29 through May 1. Staged by the Industrial Packaging Engineers Assn. of America, the program will also feature a number of talks and demonstrations covering all phases of industrial packaging.

Another highlight of the 1947 exposition, held this year for the first time, will be a protective packaging contest on which awards will be announced during the show. Packages submitted for the competition will be on display at the exposition. Supplementing the regular program features will be approximately 90 commercial exhibits of the latest equipment and materials used in industrial packaging and materials handling.

The IPEAA program will emphasize the part played by sound materials handling in the development of better protective packaging, pointing up the close relationship of these two factors all the way from the unit package to the shipping container. It is planned to demonstrate the effectiveness of scientific packaging and materials handling through a series of tests which will be conducted on the stage before the audience.

Packages submitted for the IPEAA Protective Packaging Contest are limited to 6 ft. in any dimension and their over-all weight, including the merchandise packaged, shall not exceed 300 lbs. The packages may consist of any industrial product wrapped, bundled, strapped, cartoned, boxed, crated or palletized, packed in metal or glass and falling within the above size and weight limitations. Entries will be accepted until April 26.

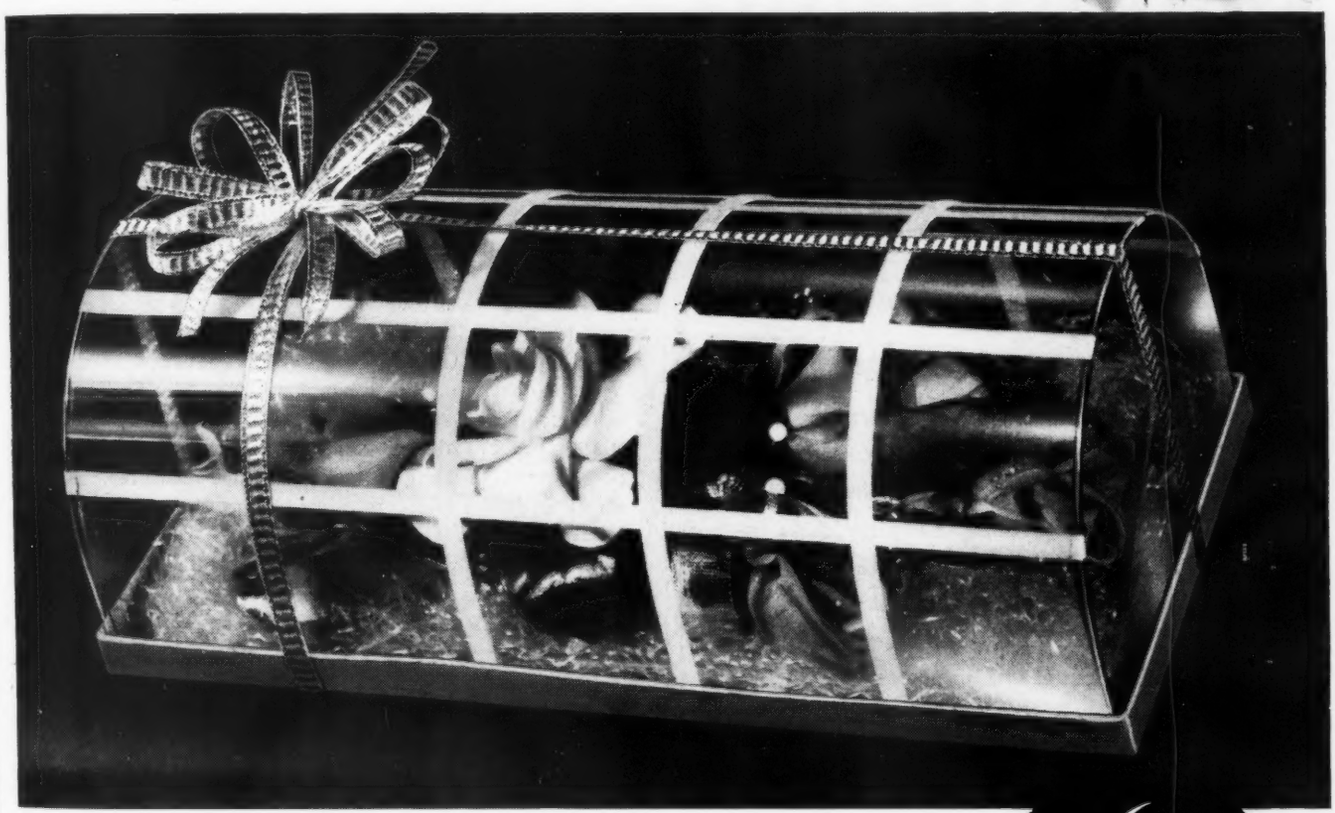
A special program on export packaging is being planned.

New canned food items

New horizons for tinplate packaged foods are revealed by a survey of new can labels appearing this season on grocers' shelves, according to the Can Manufacturers Institute. Some of these products are pictured below. They include a beef with gravy combination, wild rice, mandarine oranges and a variety of different brands of canned bakery products such as rum cake, plum pudding, date and nut bread and pumpernickel.

Fresh!

WE BRING HER THE "GREENHOUSE"!



Working in clear acetate, Kellogg Container designers conceived the *Greenhouse*, an *un*conventional box for flowers. Here is dewy freshness for milady, in a package that has rich and memory-filling significance.

Kellogg Container can develop a modern View Pac container for your merchandise in clear acetate, fashioned to protect from dust, dampness and inquisitive fingers — printed and decorated to enhance your name . . . designed to express natural beauty in *natural* settings that create the *irresistible* impulse to buy!

P-72

View Pac
RIGID TRANSPARENT CONTAINER

Send us a sample of your merchandise. We will return it to you in a *sales-engineered* package.

Container Manufacturer
Printing • Converting

KELLOGG CONTAINER DIVISION

UNITED STATES ENVELOPE COMPANY
SPRINGFIELD 2, MASSACHUSETTS

Cellophane • Pliofilm • Glassine • Foils • Vinyls • Plastics
Rigid and Flexible Acetate • Coated and Specialty Papers

★ ECONOMICAL
★ EFFICIENT
★ PROFITABLE

PRODUCTION
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PRODUC-TROL SPOTLIGHTS GOOD MANAGEMENT

Over 7500 companies... in every line of business ... depend upon this quick, visible method of mechanical control for up-to-the-minute information on order scheduling, machine loads, inventory, sales and other important functions. Produc-Trol gives an analytical picture of all business operations—singly, combined and in the correct relationship of one job to another.

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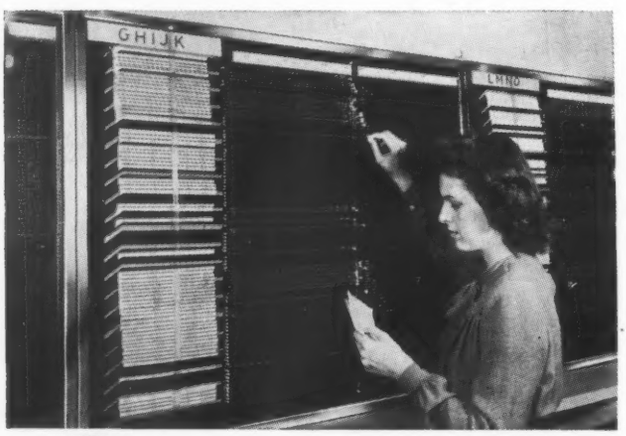
Offices in sixty-eight principal cities, United States and Canada



Produc-trol
PICTURES FACTS FOR ACTION

The 1947 packaging show

(Continued from page 125) Horning, H. C. Seaman, R. H. Hetzel, S. L. Barnes, V. A. Game, J. M. McCormick, E. F. Ebberts, R. L. Acklin, S. W. Menefee, Jr., W. E. Cash. *Hotel:* Benjamin Franklin.

ASSOCIATED COOPERAGE INDUSTRIES OF AMERICA, INC., *Booth 61.* Wooden barrels and kegs, tight and slack. *Personnel:* Fred P. Hankerson. *Hotel:* Bellevue-Stratford.

ATLAS POWDER CO., *Booth 65.* Coatings for paper, foil, textiles, etc. *Personnel:* J. T. O'Gorman, John Swenehart. *Hotel:* Penn Sheraton.

AUTOMATIC WEB GUIDE CO., *Booths 49–50.* Web control units for porous and non-porous material. *Personnel:* Irwin L. Fife, Delbert Brown, Leland J. Towne. *Hotel:* Benjamin Franklin.

BAGPRINT MACHINERY CORP., *Booth 64.* Flat and square bag machines and Aniline printing presses. *Personnel:* Walter S. Ryan, Cliff Laury, Al Bojanower, Clyde Collins. *Hotel:* Benjamin Franklin.

BAKELITE CORP., *Booth 401.* Packages made from Vinylite cast film, Bakelite polyethylene film for frozen and other food packages, spray coating process for packages, coated paper and foil, rigid sheets, Bakelite phenolic and polystyrene molding plastics, molded closures, plywood shipping drums and containers. *Personnel:* J. M. Herbert, H. R. Clark, H. G. Skinner, Roy Richards, Bruce Brown, Roger Calsibet, H. Burpo, O. J. Johnson, P. J. Rizzo.

BARRETT-CRAVENS CO., *Booth 319.* O. M. Lund, C. E. Barnes.

BEMIS BRO. BAG CO., *Booths 54–5.* Burlap, cotton, paper, Deltaseal, waterproof and open-mesh bags; multiwall paper shipping sacks, paper bag specialties, and Tite-Fit tubing. *Personnel:* A. B. Merriam, R. R. Radford, A. E. Dalldorf, R. B. Richardson, W. S. Martin, C. O. MacLeod, R. P. Fenton, A. E. Schenck, A. H. Grace. *Hotel:* Bellevue-Stratford.

BENSING BROS. & DEENEY, *Booth 629.* New Aniline "Hydrotone," a water type of ink for gift wraps and decorative papers. *Personnel:* James J. Deeney, Harold Bensing, Owen E. Adams. *Hotel:* Ritz-Carlton.

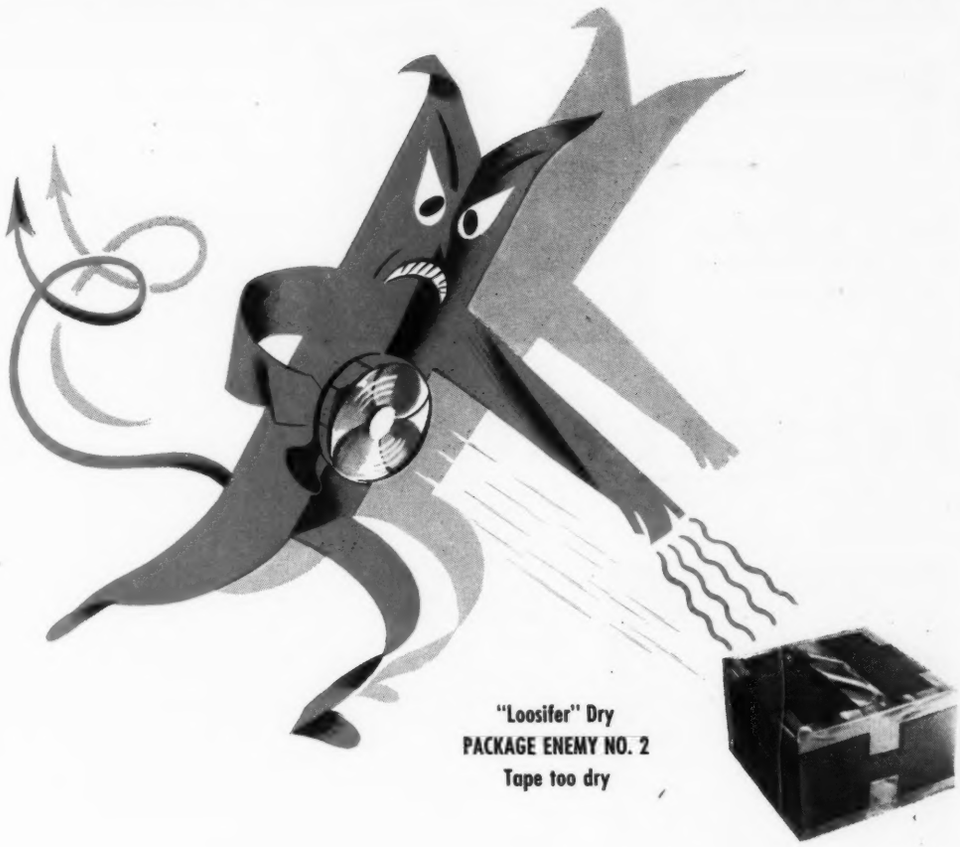
BETNER CO., BENJ. C. *Booth 506.* Automatic heat-sealer which collapses a bag in a carton, heat-seals the top and tucks bag down into carton, leaving flaps free for carton top-sealing operation; bag inserter in operation. *Personnel:* B. C. Betner, Jr., H. W. Stevens, F. S. Hinkle. *Hotel:* Penn Sheraton.

BETTER PACKAGES, INC., *Booth 306.* Counterboy gum tape sealing machines, and label and envelope moisteners; demonstration of machines featuring automatic moistening control. *Personnel:* T. H. Krueger, M. W. Waggoner, G. L. Ryder, A. D. Smith.

BURT CO., F. N., INC., *Booth 412.* New materials (plastic,

beware of "LOOSIFER DRY"

the proof of the package is in the final sealing



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PACKAGE ENEMY NO. 2
Tape too dry

AUTOMATIC MOISTENING CONTROL — patented Counterboy feature — guards against defective closure due to deficient moisture. AMC assures correct moistening *every time!* The pivoted pressure bar can be pre-set for your type of tape. Because it's *pivoted*, it automatically maintains a steady, edge-to-edge contact between tape and tandem brushes. No fear that your tape-strips will ever be left high and dry—with no stick-to-itiveness! You're always sure of fast, safe sealing with Counterboy AMC because correct "moistening judgment" is built right into your machine!

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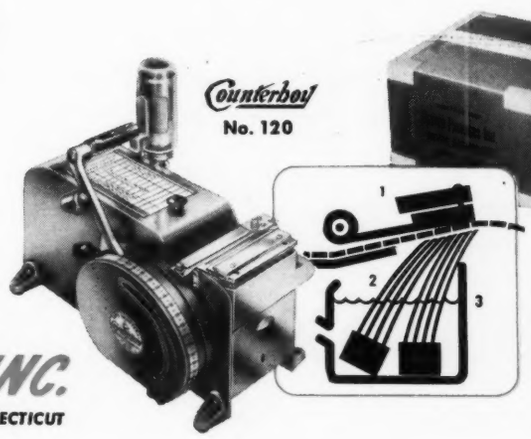

1. Pivoted Pressure Bar
2. Tandem Brushes
3. Constant Water Level

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WORLD'S LARGEST MANUFACTURERS OF TAPE DISPENSERS / SHELTON, CONNECTICUT

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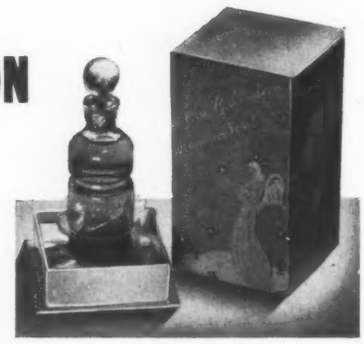

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Looking for glass bottles plus display containers?

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Richford supplies superbly designed sparkling bottles and containers as well as fine metal closures for leading perfumers and cosmetic houses. Individually created by a staff of designers full of new and interesting ideas—packaged with imagination in glass or Lucite—your combination makes an irresistible counter attraction AND one that will be preserved and treasured at home.

NOTE

Note: There is no waiting for either bottles, containers or luxuriously polished brass closures. They're delivered on the dot.

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metal, cloth and acetate in combination with multiple color lithography) to enhance paper products, of particular interest to drug, cosmetic, tobacco and jewelry fields. *Personnel:* L. S. Hagner, O. W. Honsberger. *Hotel:* Ritz-Carlton.

CARTER ENGINEERING CO., *Booth 514.* High-speed envelope filling and sealing machine. *Personnel:* C. F. Carter, J. A. Miller, J. A. Reynolds, R. E. Carter. *Hotel:* Warwick.

CELANESE PLASTICS CORP., *Booths 201–2.* Molded plastics, transparent rigid containers, window boxes, bags and envelopes, laminates and sealing tapes, with emphasis on Lumarith film. *Personnel:* D. S. Hopping. W. F. Cullom, R. Poucher, E. Miller, J. J. Keville, O. L. Bunting, Harriet Raymond, Allen Smith, Edward Smith, S. W. Jones, Jr., A. Gelderman, P. Dunn. *Hotels:* Bellevue-Stratford and Warwick.

CELON CO., *Booth 218.* Packages sealed with Celons (cellulose secondary seals). *Personnel:* Louis J. Trecek, J. S. Adams, R. H. Winston. *Hotel:* Benjamin Franklin.

CENTRAL STATES PAPER & BAG CO., *Booths 614–5.* Rigid transparent plastic containers. *Personnel:* H. L. Abramson, H. Velkoff, A. A. Abramson, S. L. Abramson. *Hotel:* Benjamin Franklin.

CHAMPLAIN CO., INC., *Booths 210–1.* Samples of rotogravure printing of wraps, labels and cartons and display of two-color rotogravure press with electric-eye attachment. *Personnel:* A. F. Goat, L. J. Remington, H. J. Conroy, E. T. Coopat, E. W. Worthington, G. Schowerer, W. A. Koenig. *Hotel:* Bellevue-Stratford.

CHASPEC MANUFACTURING CO., *Booths 605–6.* De luxe packages. *Personnel:* Charles Peckar, Richard A. Klein.

CHISHOLM-RYDER CO. OF PA., *Booth 66.* Packaging machinery. *Personnel:* E. J. Abendschein, C. M. Hesson. *Hotel:* Warwick.

CLARK CO., GEO. V., INC., *Booth 120.* "See Thru" rigid transparent containers and decorated metal cans. *Personnel:* R. S. Hirschland, R. M. Monahon, S. J. Kutner, George D. Snyder, Adrian Cohen, John S. Troth, Stanley Bright, Jr. *Hotel:* Penn Sheraton.

CLEVELAND CONTAINER CO., *Booth 513.* Tubes, cores, cans, etc. *Personnel:* W. F. Walker, J. S. Ritter, E. B. Hall, M. Kirkpatrick. *Hotel:* Bellevue-Stratford.

CONSOLIDATED LITHOGRAPHING CORP., *Booth 408.* Lithographing tools for selling: window, counter and interior displays, labels and wraps, etc. *Personnel:* Ralph D. Cole, Sidney P. Voice, Henry A. Voice, Walter J. Ash, Henry A. Topping, J. J. Jacobson, E. I. Brotan. *Hotel:* Adelphia.

CONSOLIDATED PACKAGING MACHINERY CORP., *Booth 303.* J. E. Baum, Mat C. Finn, L. F. Maurer, R. L. Rogers, B. C. York, E. L. Kuhn, E. G. Kuhn. *Hotel:* Warwick.

CONTAINER CORP. OF AMERICA, *Booth 313.* Folding

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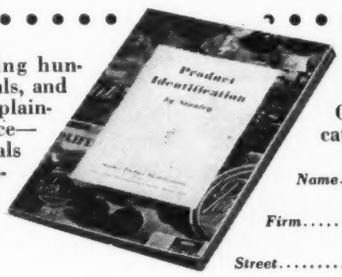

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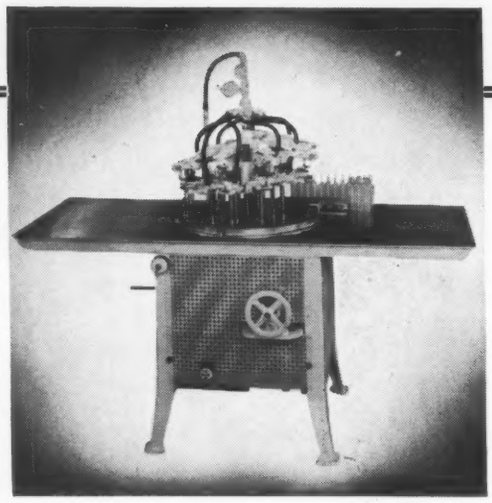

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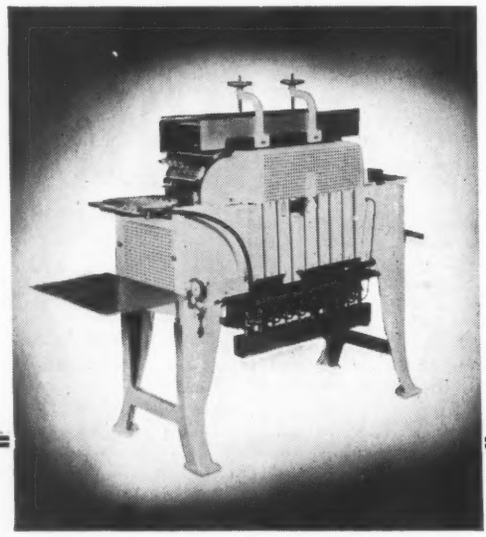

paper cartons, solid fibreboard and corrugated shipping containers, and fibre cans with paper and metal ends. *Hotel:* Warwick.

CONTAINER EQUIPMENT CORP., *Booths 11–2–3.* Model A-3901-12 CECO sealer with two additional devices which (1) continuously supply glue to the pots and (2) assure proper lubrication. *Personnel:* Fred W. Kucklinsky, E. M. Kucklinsky, William E. Haberland, Michael Derrico, J. E. Robinson, Edward J. O'Brien, H. W. Clowe, Roy F. Heller, Walter B. White. *Hotel:* Warwick.

CROASDALE & deANGELIS, INC., *Booth 24.* Standard-size, drawn, transparent Vinylite blanket box and variety of specialty plastic containers. *Personnel:* Arthur C. deAngelis, J. Morton, J. S. Troth, L. R. Page, S. Bright, Jr.

CROWN CORK SPECIALTY CORP., *Booth 616.* Closures for bottles, jars and cans. *Personnel:* Don Hill, William R. Fox, C. E. Lawrence, V. R. Hoffman, T. J. Costa, J. P. Jordan, George H. Schaffer, Jr. *Hotel:* Drake.

CUSHMAN & DENISON MFG. CO., *Booth 121.* Fountain brushes, "Cado" inks, and key cabinets and boards for locker plants. *Personnel:* Robert E. Wright, Sr., R. E. Gooley, Max Witz, Jeffrey S. Riddle, Joseph DeJure, Sr., Joseph DeJure, Jr. *Hotel:* Benjamin Franklin.

DAVISON CHEMICAL CORP., *Booths 608–9.* Desiccants, dehydrated packaging and barriers. *Personnel:* J. G. Carroll, R. D. Goodall, M. H. Baker, D. W. Avery, R. L. Hockley, N. E. Hathaway, D. Robertson, E. Bradley Bailey. *Hotel:* Warwick.

DE LUXE CRAFT MFG. CO., *Booth 15.* Gift and re-use containers of embossed and decorated artificial leather. *Personnel:* B. J. Kaplan, Martin B. Borad, Edward Bergin, Stanley Marks. *Hotel:* Bellevue-Stratford.

DIAGRAPH-BRADLEY STENCIL MACHINE CORP., *Booths 25–6.* Stencil cutting machines ranging in size from $\frac{1}{2}$ in. to $1\frac{3}{4}$ in., and complete line of shipping room supplies, including disc and solid roller Stikfast label pasters. *Personnel:* John G. Burton, J. R. Arthur, O. K. Patterson, W. J. Eilerman, N. M. McGuire. *Hotel:* Warwick.

DIAPHANE BAG CORP. OF PA., *Booths 627–8.* Bags made of converted cellophane. *Personnel:* John G. Membrino, Hercules Membrino, William E. Johnson, Joseph W. Scott. *Hotel:* Penn Sheraton.

DOBECKMUN CO., *Booth 314.* Bags, wraps, unit packages, Zip-Tape, Tritect, Metalam, Pliofilm, aluminum foil, Diafane, plastic glazing, Lurex, Colorfilm and Dobar. *Personnel:* T. F. Dolan, E. P. Whitley, J. M. Cowan, A. D. Crowley, W. D. Sweeny, R. S. Jones, K. E. Prindle, R. M. Seigle, J. C. Jorgensen, N. Rothenberg, R. Y. Taggart, T. C. Lindsay, R. R. Greene. *Hotel:* Warwick.

DOUGHBOY INDUSTRIES, INC., *Booth 131.* Heat-sealing equipment, featuring Doughboy self-feeding sealer and Doughboy conveyor table. *Personnel:* Riley Livingston. *Hotel:* Penn Sheraton.

DOW CHEMICAL CO., *Booth 63.* Ethocel sheeting, Saran

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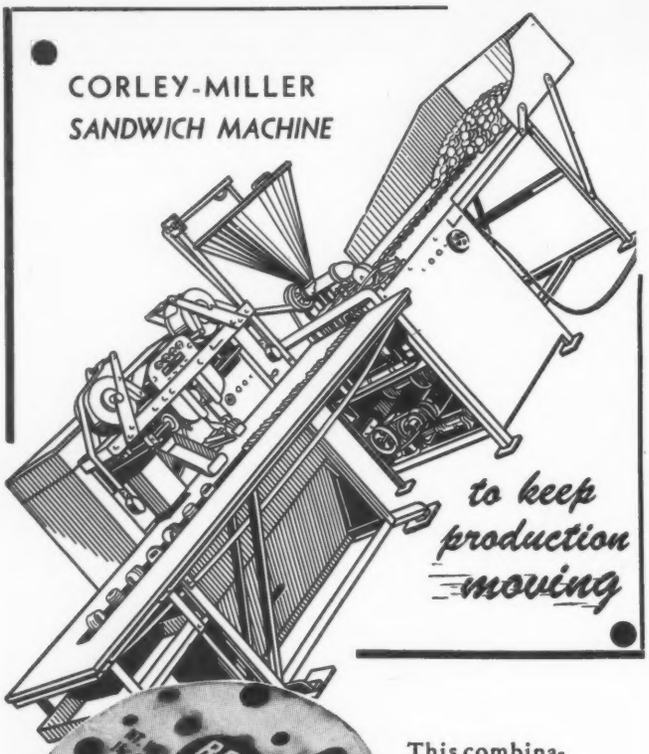
SANDWICH MACHINE



to keep production moving

This combination of the Corley-Keller Sandwich Maker and the Corley Automatic Wrapper makes and wraps appetizing peanut butter and cracker sandwiches at speeds up to 100 sandwiches per minute.... Slashes labor and material costs—only two operations needed . . . Cuts cracker breakage, reduces package weight variation to a minimum by applying butter uniformly, at proper consistency... Saves up to 20% in Cellophane! . . . Electric Eye available for printed wrappers . . . One of the many precision-built, efficient packaging machines and combinations in the Corley-Miller line . . .What's *your* need? . . . Write today!

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- ☐ Bag or Carton Filling
- ☐ Bag Sealing
- ☐ Sheeting-Gluing
- ☐ Heat-Sealing (Hot Plates & Hand Irons)
- ☐ Sandwich Making

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Miller *Wrapping & Sealing Machine Co.*

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film, and molded Styron containers. *Personnel:* D. L. Gibb, W. R. Dixon, R. J. Minbiole, F. P. Handy, N. R. Peterson, C. B. Branch, F. C. Dulmage, Jr., R. M. Upright, Hugo Schaeffer, R. M. Mason, Bayard Stone, Frank Brown, Gage Olcott, J. E. Russell, Paul Jensen, Dudley Straubel, H. C. MacDonald, R. L. Lownsbury. *Hotels:* Warwick and Bellevue-Stratford.

du PONT de NEMOURS & CO., E. I., INC., *Booths 220–1–2.* Ideas and developments concerning cellophane and cellulose acetate films. *Personnel:* T. L. Hines, A. Kunsman, C. F. Brown, W. J. Harte, R. R. Smith, W. G. Hunter, E. C. Lake, L. B. Steele, D. E. Drew, J. S. Taylor, V. C. Clark, R. J. Crowley, H. D. Chickering, A. F. Wendler.

EASTMAN KODAK CO., *Booths 511–512.* Kodapak, cellulose ester sheet, in gauges from .00088 in. to .020 in. *Personnel:* L. L. McGrady, H. Lloyd, A. B. Corey, Paul Braman, C. R. Lee, Vernon Howe, J. Gruntler, R. Caire, C. D. Snead, J. Boyes, M. F. Tucker, E. M. Drummond, A. D. Johnson, R. Locker, F. Hodgson, H. Crouch, A. Pundt, D. VanDussen.

ECONOMIC MACHINERY CO., *Booth 414.* Labeled containers produced by World automatic and semi-automatic labelers, and newest model World turret labeler, fully automatic and continuous glass labeler, in operation. *Personnel:* Sidney T. Carter, William G. Malm, Arthur O. Frykholm. *Hotel:* Benjamin Franklin.

EINSON-FREEMAN CO., INC., *Booth 310.* Lithographed window and counter displays, merchandise pyramids, full-length figures and demonstrators. *Personnel:* B. A. Dreyfuss, N. J. Leigh. *Hotel:* Warwick.

ELGIN MFG. CO., *Booth 623.* Elgin twin universal filling machine, directly connected to Elgin automatic feed semi-automatic capper; Elgin model "H" paint filler, cover dropper and capper. *Personnel:* W. B. Sanford, W. Reimer.

ERONEL SERVICES, INC., *Booth 51.* Eronel thermodip series, hot dip protective strippable plastic compounds; Protecto-Plate "R," water emulsion strippable protective film for Plexiglas, etc.; Eronel solvent type strippable protective coatings; demonstration of dipping and coating metal parts. *Personnel:* J. B. Dailey, Jr., Pierce Deane, C. E. Corsa, J. C. Fleckenstein.

ERTEL ENGINEERING CORP., *Booth 630–1.* EAS straight-line vacuum bottle filler for pints to 1 in. bottles, Ertel Pneumo-Vac straight-line vacuum filler for qts., gals., etc., and stainless steel filter unit with unusual fabrication features. *Personnel:* Francis X. Dealy, Fred J. K. Ertel. *Hotel:* Bellevue-Stratford.

FACIL FABRICS CORP., *Booth 102.* Facil-Fab, satin-faced packaging material; embossed designs in 20 colors; Facil-Fab packaging ribbon, and sample Facil-Fab-made boxes. *Personnel:* Eugene Jacobson, Jack Gruber, George Shulman, Murray Weill, Charles Kandel, William Price, Bruce L. Schneider. *Hotel:* Benjamin Franklin.

FERGUSON CO., J. L., *Booth 305.* Automatic shipping case sealer, single auger packer for powdered non-free-flowing products, and volumetric filler. *Personnel:* H. L. Greene,

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★For developing new products...

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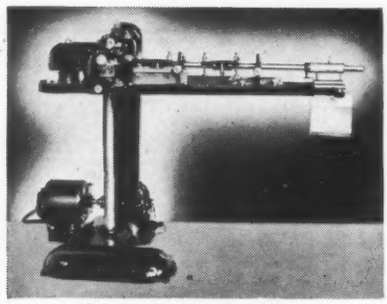
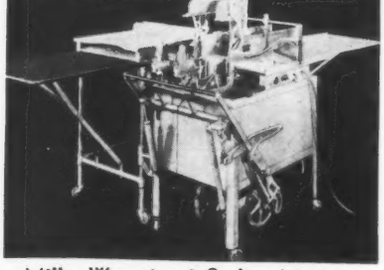


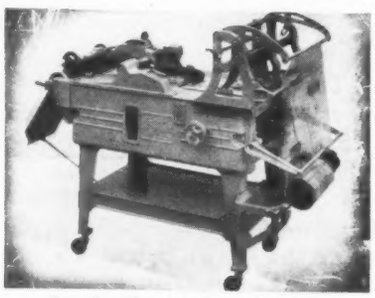
Amsco Automatic Rotary Bag Sealing Machine

YOUR



Miller Wrapping & Sealing Machine

PACKAGING



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YOU CAN cut costs and speed production at the same time—with Amsco Packaging Machinery. These three models are boosting efficiency in many plants right now. Other models for:

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- bag and carton weighing and filling
- bag aligning and conveying
- wrapping
- sheeting and gluing
- sandwich making and wrapping
- hand and foot operated sealing devices

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P. D. Bowley, C. A. Claus, E. H. Eustice, J. W. Bradford, Thomas McLay. *Hotels:* Warwick and Bellevue-Stratford.

GAYLORD CONTAINER CORP., *Booths 203–4.* Corrugated and solid fibre containers designed for difficult shipping problems, Gaylord folding cartons, kraft grocery bags and wrapping paper. *Personnel:* B. M. Williams, R. K. Withrow, C. E. Taylor, Kent Ravenscroft, F. R. McGregor, R. Shoknecht, J. C. Van Cleaf. *Hotel:* Warwick.

GENERAL BOX CO., *Booth 126.* General wirebound, wood cleated corrugated and corrugated containers, and Generalift wirebound pallet box and pallets. *Personnel:* N. A. Fowler, J. F. Ferguson, George T. Walne, H. B. O'Donnell, T. W. Regan, T. A. Shipley, C. C. Langill, John Ladd, H. F. Bowe. *Hotel:* Benjamin Franklin.

GENERAL MILLS, INC., *Booths 618–9–20.* Two large Carter-Vac fillers in operation. *Personnel:* A. D. Hyde, G. C. Becker, Paul Fischer, Henry Hanson. *Hotel:* Bellevue-Stratford.

GENERAL PRINTING INK, *Booths 22–3.* Printing inks for food cartons and labels, wooden boxes, plastic films, lithographic and rotogravure inks, and metal decorating inks for collapsible tubes and metal containers. *Personnel:* William G. Forster, James J. Campbell, E. J. Bryson. *Hotel:* Benjamin Franklin.

GOAT CO., FRED, INC., *Booth 212.* Weightrol automatic check weighing and indicating machine. *Personnel:* E. M. Haines, R. A. Stone. *Hotel:* Warwick.

GOODYEAR TIRE & RUBBER CO., *Booth 405.* Sample applications of Pliofilm in food, tobacco and pharmaceutical fields. *Personnel:* A. B. Clunan, A. F. Landefeld, W. J. O'Keefe, R. J. Buskirk, J. B. Post, A. E. Grundy, F. E. Wilson, C. P. Joslyn, J. H. Conrad, R. H. Kilgore, J. E. Snyder, M. D. Coulter, J. F. Stalter, J. S. Brewster, E. G. Schick. *Hotels:* Bellevue-Stratford, Benjamin Franklin, Warwick.

GOTTSCHO, ADOLPH, INC., *Booth 624.* Automatic industrial and package marking machines. *Personnel:* Ira Gottscho, A. van der Lyn, G. E. Klug, F. C. Worth, L. G. Pick.

HANLINE CO., H. G., *Booth 318.* Carton stitching machines, nailing machines for precision work, shipping department supplies. *Personnel:* Ted Tettemer.

HARCO INDUSTRIES, INC., *Booth 625.* Fabricating equipment for plastics aimed primarily at transparent packaging. *Personnel:* Harvey M. Bryans. *Hotel:* Drake.

HAYSSEN MFG. CO., *Booth 407.* Carton, fresh fruit and vegetable wrapping machines. *Personnel:* William A. Hayssen, Frank Horwitz, George Laing, Leslie Laing. *Hotel:* Benjamin Franklin.

HAZEL-ATLAS GLASS CO., *Booths 216–7.* Application of glass in transportation, architecture, interior decoration, industry and science. *Personnel:* J. H. Hendrikson, Frasier Smith, A. L. Key.

HEAT SEAL-IT CO., *Booths 28–9.* E-Z open closure, Seal-

PUT A GLEAM IN THEIR EYE

Box papers by Middlesex put a gleam in the eye of consumers everywhere. Arresting—distinctive—their brilliant designs never fail to catch the eye, hold attention, make friends.

And box papers by Middlesex will put a gleam in your eye—they glitter! They sparkle! Besides the foil shown on this page our line contains a wide selection of box coverings:

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MICA COATED
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EMBOSSED
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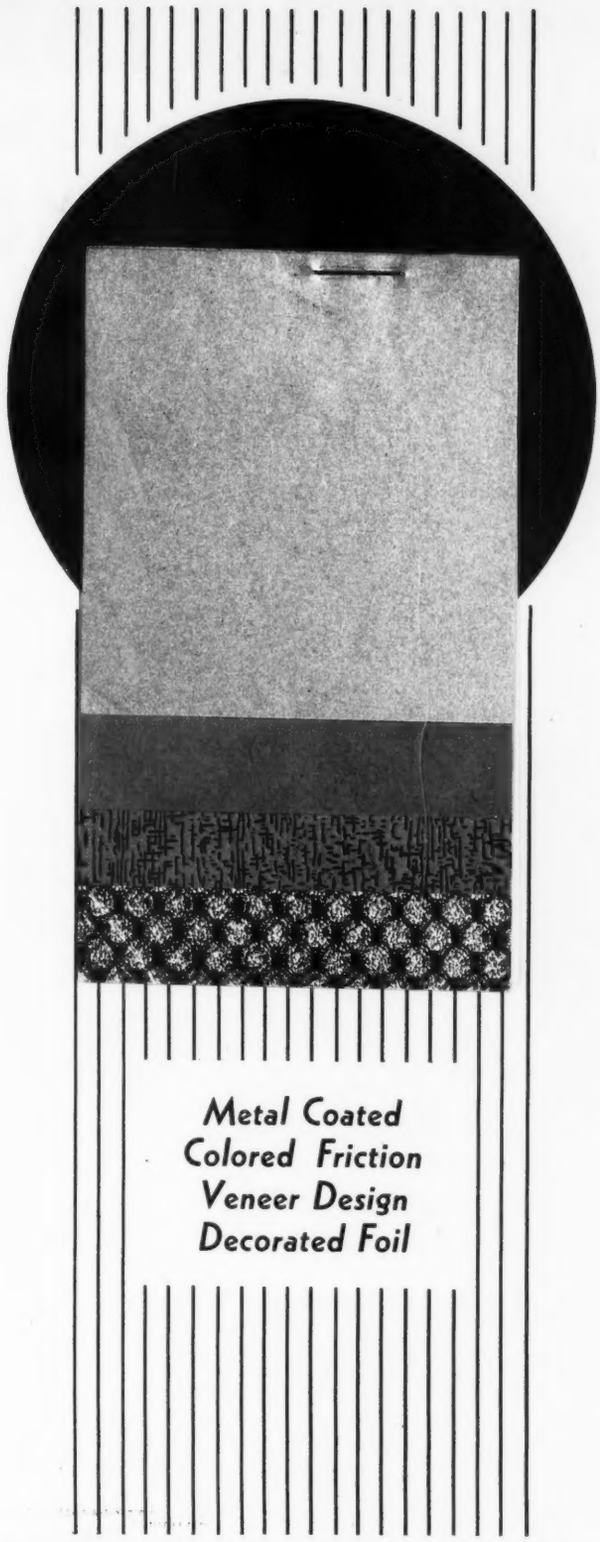

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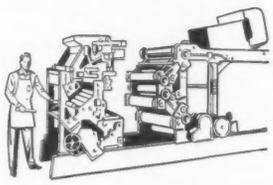

DAY after day, for more than eight consecutive years, Hess & Barker's four to six color rotary printing presses, have with ease and in perfect register, delivered millions and millions of fine printing impressions.

Two Hess & Barker Rotary Presses in one plant operated year after year, without a single breakdown.

And the specially designed teeth in the cylinder and bull gears, after printing all these millions of impressions, are now in perfect condition.

One pressman in this plant when asked, "What do you think of Hess & Barker's press," said: "These babies can really take it."

And they can, because Hess & Barker's press is designed and built to run trouble free.

The oscillating rollers are not synchronized, assuring perfect ink distribution to all the form rollers. That is why you get the very maximum coverage from whatever grade ink is used.

The plate cylinders are made of solid forged steel. That greatly reduces plate fatigue.

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Cylinder and bull gear teeth are specially designed which eliminates all lost motion, insuring perfect register at high or low speeds, on glassine paper or stock of 240 lb. basis.

The entire press is precision built to last a long, long time and 100% hairline register is guaranteed.

If you have the 4 to 6 color printing to keep a Hess & Barker rotary printing press busy, you can make a handsome profit on your investment.

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It board packaging process, and demonstration of crimp heat-sealing bag sealers, packaging and bag making machines. *Personnel:* H. L. Reitzes, Charles Reitzes, I. Fixman, H. Rosenwald, C. Bower.

HEINRICH, H. H., INC., *Booth 110.* Demonstration of flat-bed and rotary Opti-chek machines for checking register of color printing plates. *Personnel:* H. H. Heinrich, E. L. Harley, H. H. Norden, J. E. Myers. *Hotel:* Benjamin Franklin.

HINDE & DAUCH PAPER CO., *Booth 219.* Insulpak box for temperature-protective shipping; collapsible one-piece double box for shipment of fruit and live lobsters; Plypak wrapping material for fragile merchandise; boxes for packing bulk frozen foods, baby chicks, eggs, and quality fruits. *Personnel:* J. H. MacLeod, R. W. Whitney, Paul Meelfeld, H. L. Kast, R. A. Frishmuth, C. H. Wendt, E. P. McDonald, George Behringer, R. O. Wilson. *Hotel:* Benjamin Franklin.

HORIX MFG. CO., *Booth 413.* High-speed fully automatic rotary liquid fillers, Horix HBV 18-valve gravity-vacuum type filler, gravity case conveyor. *Personnel:* T. J. McLay, W. A. Grove, Ralph Reno, J. L. Scanlon, Renwick McWilliam. *Hotel:* Penn Sheraton.

IMPORTED DELICACIES CO., INC., *Booth 206.* Decorated metal boxes and containers. *Personnel:* Benjamin Greenstein, Alexander Katzman, Sam L. Kaye, M. Rehns, Carl Molk. *Hotel:* Benjamin Franklin.

INDUSTRIAL TAPE CORP., *Booth 626.* Pressure-sensitive tapes for packaging and dispensers. *Personnel:* W. E. Mayers, J. H. Scherer, L. E. Barnes, A. M. Wagner, G. E. Chisholm. *Hotel:* Sheraton.

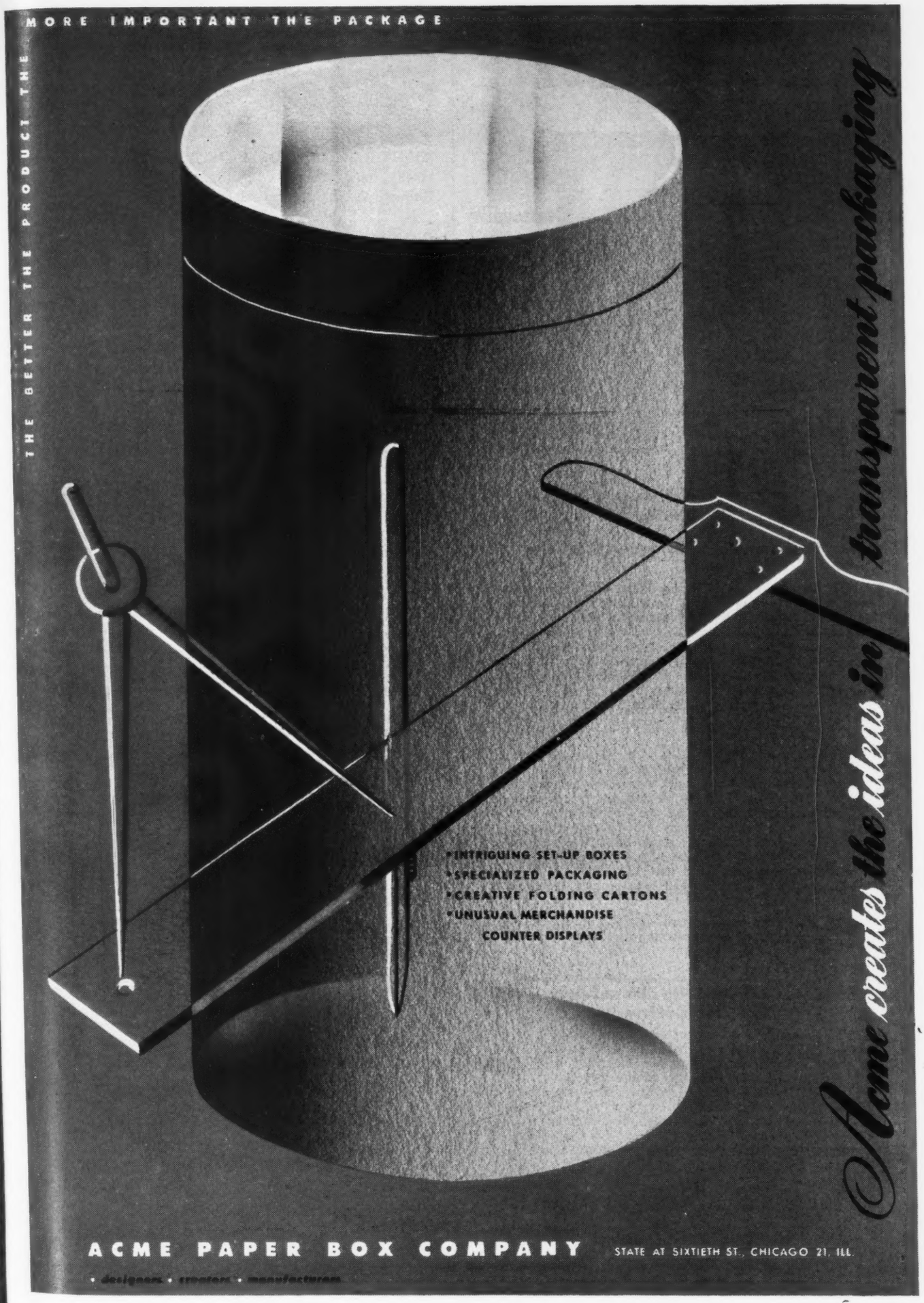
INTERNATIONAL PRINTING INK, *Booth 520.* Complete line, IPI printing inks and color control; IPI dipping compounds for coloring plastics. *Personnel:* W. F. Cornell, Ralph Rogers, George Welp, E. H. Davis, William Davis. *Hotel:* Bellevue-Stratford.

INTERNATIONAL STAPLE & MACHINE CO., *Booths 44–5–6.* Machines using retractable anvil principle enabling user to staple packed corrugated cartons. *Personnel:* Werner Schafroth, Roy Sharpnack, D. W. McKee.

JONES & CO., R. A., INC., *Booths 516–7.* Demonstration of Jones cartoner which sets up, fills, closes and discharges cartons. *Personnel:* W. Jones, A. E. Motch, R. T. Foreman, Jerome Wilson. *Hotel:* Benjamin Franklin.

JONES BOX CORP., JESSE, *Booth 229.* Samples of cardboard, paper, wood, leatherette, fabrikoid, cloth, acetate and plastic packages; custom demonstrations by sample making and art departments; small manufacturing unit. *Personnel:* M. H. Fenkel, Philip R. Hauck, Rose M. Gutmann, Wellington Kreb, L. Cravitz, Isabelle M. Neville.

KALAMAZOO VEGETABLE PARCHMENT CO., *Booth 302.* Waxed, parchment, greaseproof and special treated food protection papers, with emphasis on the printed carton sealing line for cereals, crackers, biscuits, soap, etc. *Personnel:* Glenn Stewart, Merle Wood, W. E. Swan, W. E. Martin, C. A. Blackwood, George R. Spies, C. Wilson Wood. *Hotel:* Walnut Park Plaza.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•UNUSUAL MERCHANDISE COUNTER DISPLAYS
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HIGH SPEED
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For Packaging and Wrapping Machines

HOW IT WORKS . . . The Fisher-Pierce High Speed Register Control has been designed as a component for either intermittent (stop and go) or continuous flow high speed wrapping and packaging machines . . . can be supplied with or without self-timed reset. In the former, intermittent type of machine, the stopping point of the wrapper is determined by the position of the register mark. In the latter type of machine, (continuous flow) an early or late appearance of the register mark, initiates a change in rate of feed for an adjustable interval.

HIGH SPEED AND AUTOMATIC . . . The intelligence is initiated in the photo control by the change of light intensity as the registration mark enters the scanner field of view. This change may be as little as 1 foot candle, and the duration of the change may be between 0.0001 second and 0.5 second. Scanners are designed to supply illumination and also hold the photo-tubes which operate from reflected light. By the use of separate Light Source and Photo-tube Housing, the unit operates from transmitted light. (A combination unit may be had if desired).

CHASSIS . . . The entire chassis of this device is so designed that it plugs into the housing as simply as a tube in a socket.

Scanner For Use With Fisher-Pierce Register Control

The Scanner is a compact single unit for reflected light, including both the light source and the phototubes. There are no critical reflection angles between the wrapping-medium surface and the scanner enclosure. This scanner gives at least twice the differential response of any other unit for the same material contrast and lamp intensity.

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BOSTON 21, MASS.

KIMBERLY-CLARK CORP., *Booth 215.* Kimpak crepe wadding, with examples of its use for interior cushioning of various products. *Personnel:* R. B. Sawtell, Frank A. Biederman, S. L. Swenson, W. M. Dunn, F. R. Haggren, R. J. Piltz, D. L. Merritt, R. L. Schell, W. A. Hemming, J. E. Kirk. *Hotel:* Benjamin Franklin.

KIMBLE GLASS CO., *Booth 35.* Ampuls, vials, serum bottles, etc. *Personnel:* E. B. Dennis, Jr., J. J. Moran, Kenneth Hewitt. *Hotel:* Bellevue-Stratford.

KONO-MEAD EQUIPMENT CORP., *Booths 47–8.* Demonstration of Roto Bag machine, producing fabricated bags of various heat-seal coated materials by a combination heat- and glue-sealing method. *Personnel:* Harry W. Konopny, Richard H. Schnoor. *Hotel:* Benjamin Franklin.

LEEDS SALES CO., INC., *Booths 111–2.* Single service dispensers for salt and pepper, moisture-proof and resistant specialty bags, setup boxes, folding boxes, lithographed labels and wraps, cellophane bags. *Personnel:* C. M. Leeds, Robert C. Hazen, Francis T. Carey, John J. Desiati, Leo Glantz, Francis P. Romano, John Desmarias, George F. Bartlett, Sidney J. Spectorman, Sidney Nass, Joseph R. Patterson. *Hotel:* Warwick.

LINK & CO., L., INC., *Booth 604.* Link gummed tape and label moisteners. *Personnel:* William Schwartz.

LYNCH PACKAGE MACHINERY CORP., *Booth 2.* Wrap-o-matic machines equipped with automatic card former and feeder device, using rolled stock material, for candy bars, bakery products, butter, etc. *Personnel:* M. H. Pendergast, J. P. McCarthy, T. C. Werbe, Jr., M. V. Girkins, O. Sandberg, F. Lenhart, M. J. Czarniecki, Jr., W. Girkins, R. H. Werbe, H. Coon, R. Graf. *Hotel:* Benjamin Franklin.

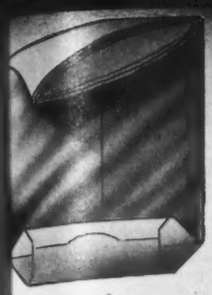
MANHATTAN PASTE & GLUE CO., INC., *Booth 409.* Adhesives and merchandise using adhesives. *Personnel:* Arthur H. Miller, Frank S. Kupfer, C. W. Reed, Harry Barrof, David Coban, Sam Eittelberg. *Hotel:* Bellevue-Stratford.

MARATHON CORP., *Booth 3.* Packages and packaging materials for food industries; demonstration of heat-sealing label applicator, specially designed for top labeling of wrapped packages; Kartridg-Pak machine banding electric light bulbs, etc. *Personnel:* Donald A. Snyder, Frank L. Broeren, Russell C. Flom, Owen E. Lyons, A. W. Stompe.

MARSH STENCIL MACHINE CO., *Booth 14.* Marking supplies and stencil cutting machines, featuring circular cutting attachment for cutting round stencils. *Personnel:* Walter Marsh, E. J. Marsh, Harry Brown. *Hotel:* Benjamin Franklin.

MATTHIAS PAPER CORP., *Booth 611.* Fancy box covering paper. *Personnel:* Charles Matthias, Frank H. Matthias, Raymond H. Matthias, Ralph J. Matthias, Charles A. Dando, Earl C. Curry, Stanley E. Sims, Dan F. Sullivan.

MERCHANTS BOX CO., *Booth 603.* Fancy novelty wood boxes for the candy, stationery, food and tobacco industries, featuring miniature cedar chests, silverware chests, candy



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ACKAGE Savings THROUGH PAPER BAGS

AUTOMATIC BAGS

CELLOPHANE & GLASSINE

INNER BAGS

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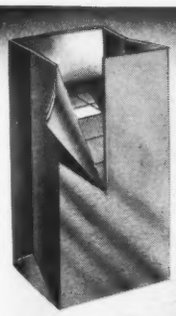

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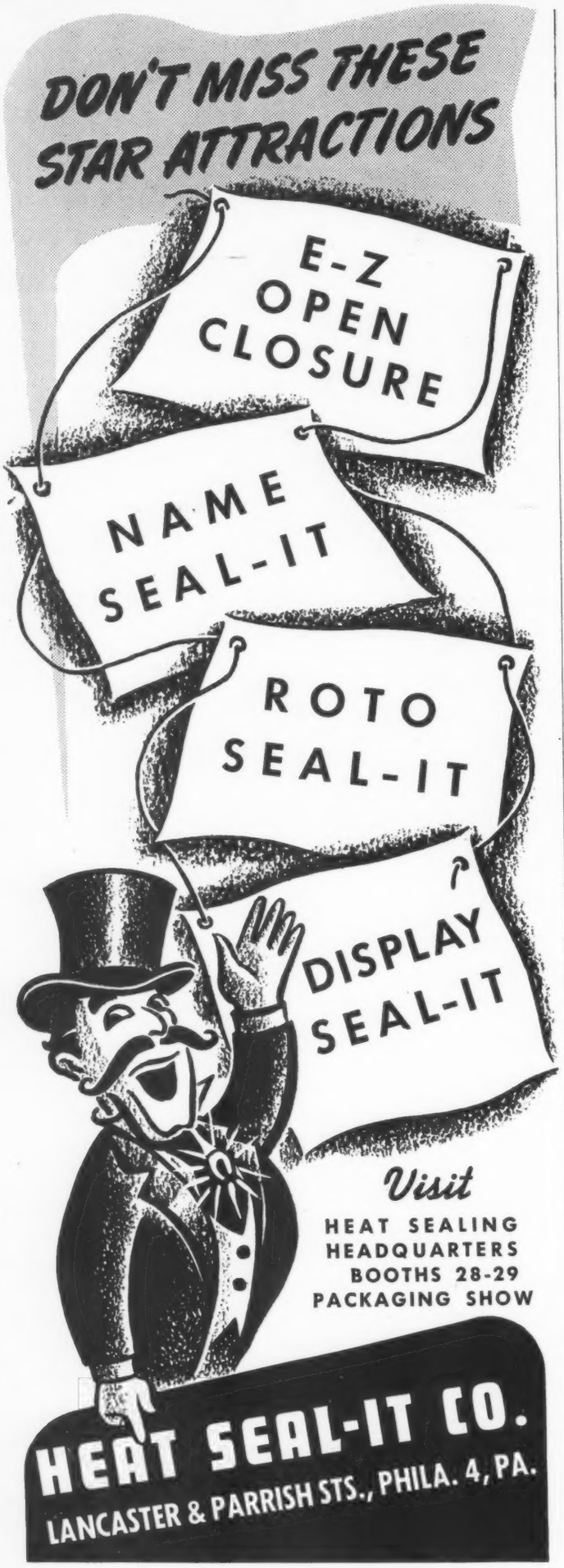


boxes, sewing boxes, and pipe humidors and displays. *Personnel:* W. J. Ferris, G. L. Herbert, M. Pepkin. *Hotel:* Penn Sheraton.

MILPRINT, INC., *Booth 307–8.* Creative packaging and printing, in cellophane, glassine and foil, and featuring Mil-O-Seal, cheese pouches and Trans-Vision process. *Personnel:* Roy E. Hanson, Shy Rosen, Don Faulkner, Charles Brelle, Carl Jensen. *Hotel:* Warwick.

MINNESOTA MINING & MFG. CO., *Booths 8–9.* Scotch brand tapes, 3M adhesives and dispensing equipment. *Personnel:* C. C. Smith, B. W. Lueck, W. E. Zimmerman, L. E. Tyas, A. S. Drew, L. E. Weyand.

MODERN CONTAINERS CO., *Booth 27.* Heat-seal materials and bag making machine. *Personnel:* William R. Berryman, Charles E. Gates, Charles Mahler, Francis X. Mohan, Richard Nagle. *Hotel:* Benjamin Franklin.

MONSANTO CHEMICAL CO., *Booth 1.* Monsanto's plastics for packaging, featuring Vuepak and Lustron, and functional materials for closures, labels and sealing. *Personnel:* James R. Turnbull, R. C. Evans, E. D. Kennedy, William A. Lang, L. C. MacLeod, Raymond Barkhuff, John Murphy, Ralph Hansen, James Brunner, David Guarnaccia, G. J. Marceau, Don Layfield. *Hotel:* Benjamin Franklin.

MOSSTYPE CORP., *Booth 30.* Samples of continuous printing from rubber plates and rubber design rollers, for bags, wrappers, box coverings, gift wraps, etc., on paper, cellophane, glassine, foil, etc.; rubber plate mounting and proving machine. *Personnel:* Franklin Moss, A. R. Bradie, J. F. Kirby, Jr., J. A. LeCraw. *Hotel:* Ritz-Carlton.

MRM CO., *Booths 621–2.* MRM automatic and semi-automatic vacuum filling machines. *Personnel:* H. D. Manas, A. Wilkin, A. Benda, A. McAdams. *Hotel:* Penn Sheraton.

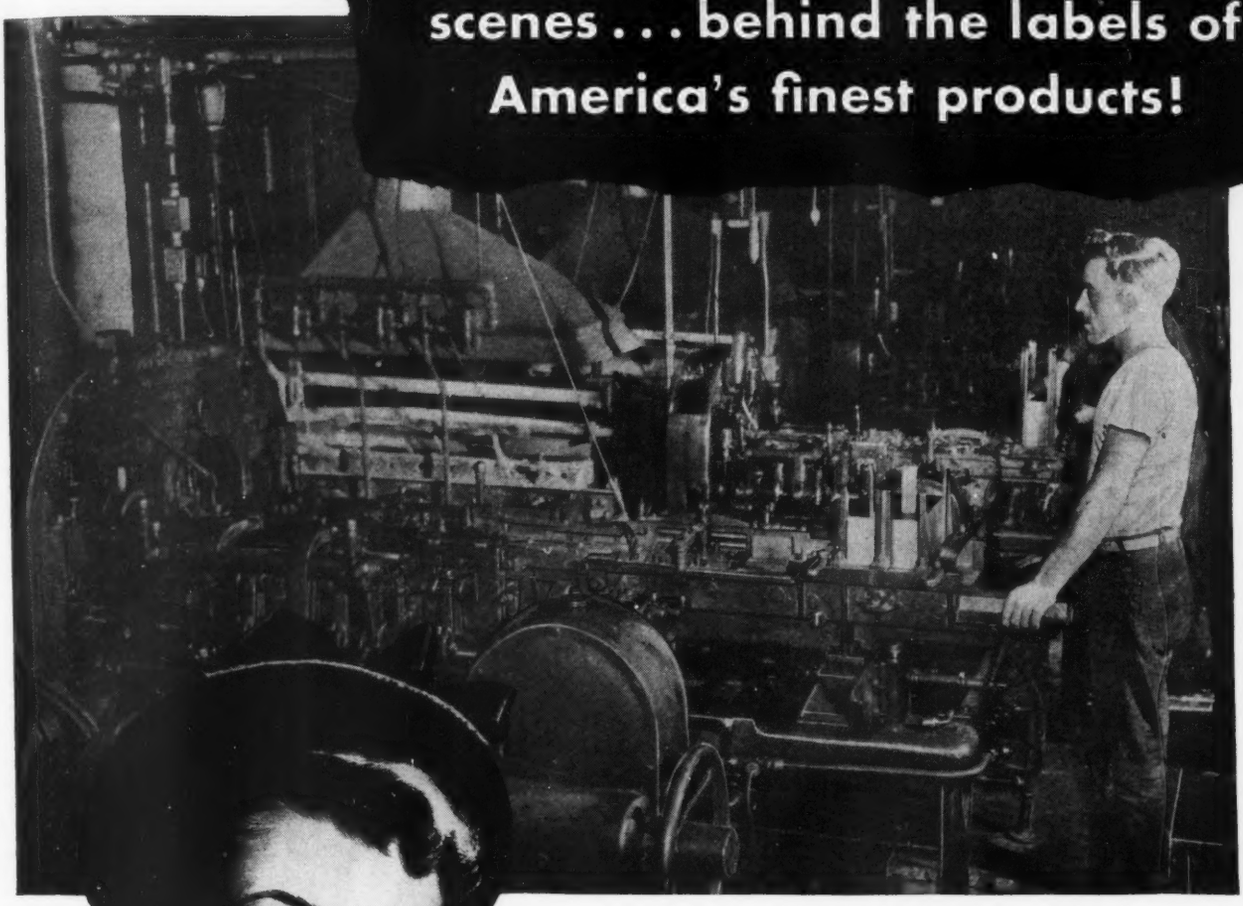
MULTISTAMP CO., INC., *Booth 37.* Demonstration of Multistamp portable stencil duplicators for addressing shipping tags and labels, boxes and packages and for various marking applications on packages, cartons, boxes and labels. *Personnel:* Frank W. Pennington, Samuel Levine.

NASHUA GUMMED & COATED PAPER CO., *Booths 104–5–6.* Packaging materials including waxed, coated, gummed and trademark paper; foil; cloth; vinylite; printed cellophane; glassine; paper specialties; gummed tape; gummed tape machines. *Personnel:* Donald Ramsay, Frank Cookson, J. R. Carter, William Foster, Karl R. Hines, Jr., Charles Foley, Robert Smith, Otto Neugebauer, B. G. Bundy, George Coffin, E. W. Wilson, H. L. Openshaw, Austin Sanborn, Charles Graves. *Hotel:* Drake.

NATIONAL ADHESIVES, *Booth 403.* Rustic cabin rest space, providing display of company products and packaging applications of adhesives. *Personnel:* Frank Greenwall, C. A. Gage, Donald D. Pascal, Ralph C. McGaffin.

NATIONAL METAL EDGE BOX CO., *Booth 301.* Exhibition of Metal Edge packaging; material handling and inventory control, with demonstration of Metal Edge stayer. *Personnel:* C. F. Banks, L. E. Berry, C. H. Black, R. A. Branca, E. L. Bray, M. Cohee, J. E. Fleagle, W. K. Hollinger,

Continental serves behind the scenes . . . behind the labels of America's finest products!



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That's why "made right" is Continental's proudest claim for its lithographed metal containers. Every step in this manufacture—from selection of raw materials through lithographing, body-forming and seaming—is painstaking and exact. Forty-two years of experience in the field—making more than 500 different shapes and types of containers for thousands of products—have developed our production equipment and manufacturing skill to top efficiency.

Add this to our exacting methods of inspection, testing and checking. Then you'll see what we mean when we say, "Continental cans are *made right!*" That's why thousands of metal container users look to Continental for the best in quality and the best in service.

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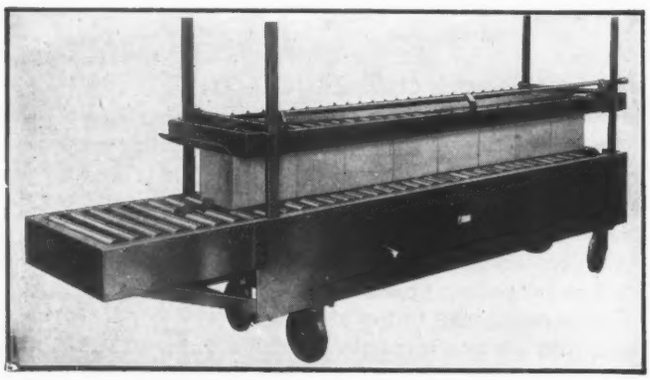

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Designed for plants with limited production runs. Applies pressure to corrugated container flaps while adhesive sets, eliminating several operations. *Reasonably priced.*

Adjustable for containers 3" to 26" wide, 4" to 40" long, 1½" to 30" high.

Special Engineering Service

Packaging machines correctly designed and constructed to fit your own special requirements.

ABC PACKAGING MACHINE CO.

QUINCY, ILLINOIS

J. A. Jobes, M. P. Junkin, S. George Karr, W. G. Muhleisen, C. Paist, F. Salzman, H. Snyder, L. Wismer. *Hotel:* Warwick.

NATIONAL TRANSPARENT PLASTICS CO., *Booth 130.* Acetate containers of all types; inflatable vinyl beach balls, bags, cushions, mattresses; vinyl rain hoods and scarfs, etc. *Personnel:* Arnold Aronson, Russell Chapin, Robert Bourbeau, Richard Sharkey, Herbert Gordon.

NATIONAL WATERPROOFING CO., *Booths 416–7.* Asphalted, oiled, and waxed waterproof papers, and handmade bags and case liners.

NEW JERSEY MACHINE CORP., *Booths 518-9.* New model 160 fully automatic thermoplastic labeler, and samples of packages labeled on various types of New Jersey equipment. *Personnel:* George von Hofe, Richard Wellbrock, Peter L. Heguy, Arthur A. Schaefer, James F. Parsons, Jr., Robert Mittricker, James Brown, Kurt Niemeier, Richard Tank. *Hotel:* Benjamin Franklin.

OLIVER MACHINERY CO., *Booth 205.* Illustrations of wrapping machines, special label and imprinting equipment, label samples. *Personnel:* R. C. Russell, H. B. Tuthill, Arthur Blake, William Lowthian, C. F. Gorham, E. V. McCarthy.

OWENS-ILLINOIS GLASS CO., *Booth 117.* Variety of Duraglas containers in drug, pharmaceutical, proprietary, household, chemical and toiletry fields; one-way beer bottle, Ultra-Vac coffee jar, and 6½ gal. acid carboy with polystyrene closure. *Hotel:* Benjamin Franklin.

PACKAGING SERVICE MAGAZINE, *Booth 76.* Roland M. Carr, Nan Eastern, E. C. Bair. *Hotel:* Ritz-Carlton.

PACKAGE MACHINERY CO., *Booths 213–4.* Model DF-1 candy bar wrapping machine and model Universal-4 produce wrapper. *Personnel:* Roger L. Putman, George A. Mohlman, Thomas Miller, E. Lovell Smith, John R. Tindal, N. W. Lyon. *Hotel:* Benjamin Franklin.

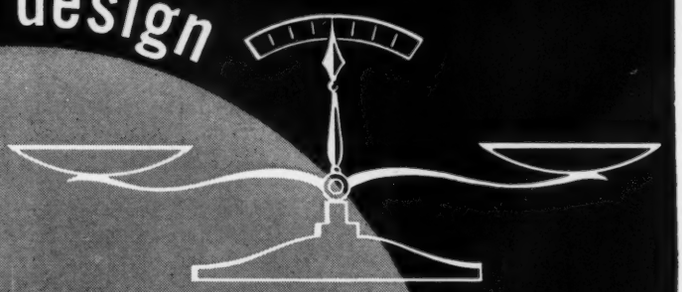
PACK-RITE MACHINES, *Booth 309.* Packaging and sealing machines. *Personnel:* Wilbur Techtmann, Mrs. G. A. Techtmann, Lawrence J. Nelson, Patric J. Martin.

PAISLEY PRODUCTS, INC., *Booth 207.* Illustrations of manufacture and application of adhesives. *Personnel:* Murray Stempel, Earl C. Lenz, S. Schuller, Joseph Morningstar, Percy P. Morningstar, H. R. Callahan, Julius A. Ranft, Larry Cox, L. LaBrie, S. Stewart, John Renshaw, G. Carmody, George J. Muller, J. B. Morningstar, E. M. Hillary, W. H. Stechmann, A. R. Nordone, M. F. Lenz, B. Scholl, H. Whitam, R. Bennett. *Hotel:* Benjamin Franklin.

PETERS MACHINERY CO., *Booth 617.* Demonstration of closing pretzel cartons by Peters D&W type senior carton folding and closing machine; samples of variety of packages handled on Peters machines. *Personnel:* H. K. Becker, B. C. Lewis, J. Boehler. *Hotel:* Warwick.

PHILADELPHIA CONTAINER CO., *Booth 137.* Fibre cans (metal tops and bottoms), paper cans (paper tops and bottoms), paper specialties. *Personnel:* J. F. Higgins, A. J. Jacks, F. W. Hart, T. Cahill, M. Kenig.

a feature of Gaylord balanced design



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Gaylord Boxes

To protect your product in handling from factory to user, perfect fit is essential. The product must be held snugly, and box parts join accurately.

Gaylord Boxes give added protection through closer tolerances in design and manufacture.

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It doesn't take a "Sherlock Holmes" to know that this modern, eye appealing way of packaging builds sales.

Send for samples and definite suggestions for packing YOUR products.

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MFRS. SINCE 1919
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PILLIOD CABINET CO., *Booth 4.* Fancy wooden boxes for silverware, cosmetics, jewelry, etc. *Personnel:* Lawrence L. Pilliod, Charles W. Kulp.

PNEUMATIC SCALE CORP., LTD., *Booth 224.* Packaged goods produced on Pneumatic machines. *Personnel:* N. S. Ross, W. E. Coughlin, Fred Todt, J. Yates, L. I. Hodgdon, K. M. Peterson. *Hotel:* Benjamin Franklin.

POTDEVIN MACHINE CO., *Booth 410.* Movable roller open-end gluer for over-all gluing or edge-gluing materials of varying thicknesses without adjustment; bench gluer with removable glue tank; E-Z hand labeler for applying labels to bottles; label pasters, and conveyor gluer for production line labeling. *Personnel:* Julian Richmond, J. Henry Richmond, Joseph S. Hawkins, Owens L. Denton, Sumner Norton, Truvan Gibson, James S. Hamilton. *Hotels:* Drake and Bellevue-Stratford.

PROTECTIVE COATINGS CORP., *Booth 36.* Protective packaging materials including Aquastop (for waterproofing) and M-V-Bar (for dehydration packaging), protective coating materials including Plastipeel (strippable plastic coatings), and paper coating materials including Antaqua (waterproof papers). *Personnel:* Walter L. Hardy.

RADIO CORP. OF AMERICA, *Booth 515.* Demonstration of RCA electronic metal detector. *Personnel:* W. H. Bohlke, A. H. Hofberg, J. Durous, J. P. McCarvill. *Hotel:* Benjamin Franklin.

RAPIDS-STANDARD CO., INC., *Booths 525–6.* Rapids-Standard gravity conveyor, coupled with improved belt conveyors, hand and platform trucks, casters and the Press-Veyor belt conveyor. *Personnel:* H. R. Pearl, Roland R. Robey, William Connelly, Larry Hillis, George Pattok, Claude V. Meconis. *Hotel:* Penn Sheraton.

REDINGTON CO., F. B., *Booth 125.* Samples of packages produced on Redington machines. *Personnel:* Charles L. Barr, E. A. Siebert, J. C. Hotton. *Hotel:* Adelphia.

REYNOLDS METALS CO., *Booth 404.* New principles in aluminum packaging and in use of aluminum foil. *Personnel:* George E. Egger, C. F. Manning, D. Peters, G. S. Nagle, Reed Gray, A. I. Totten, Van MacNair. *Hotel:* Warwick.

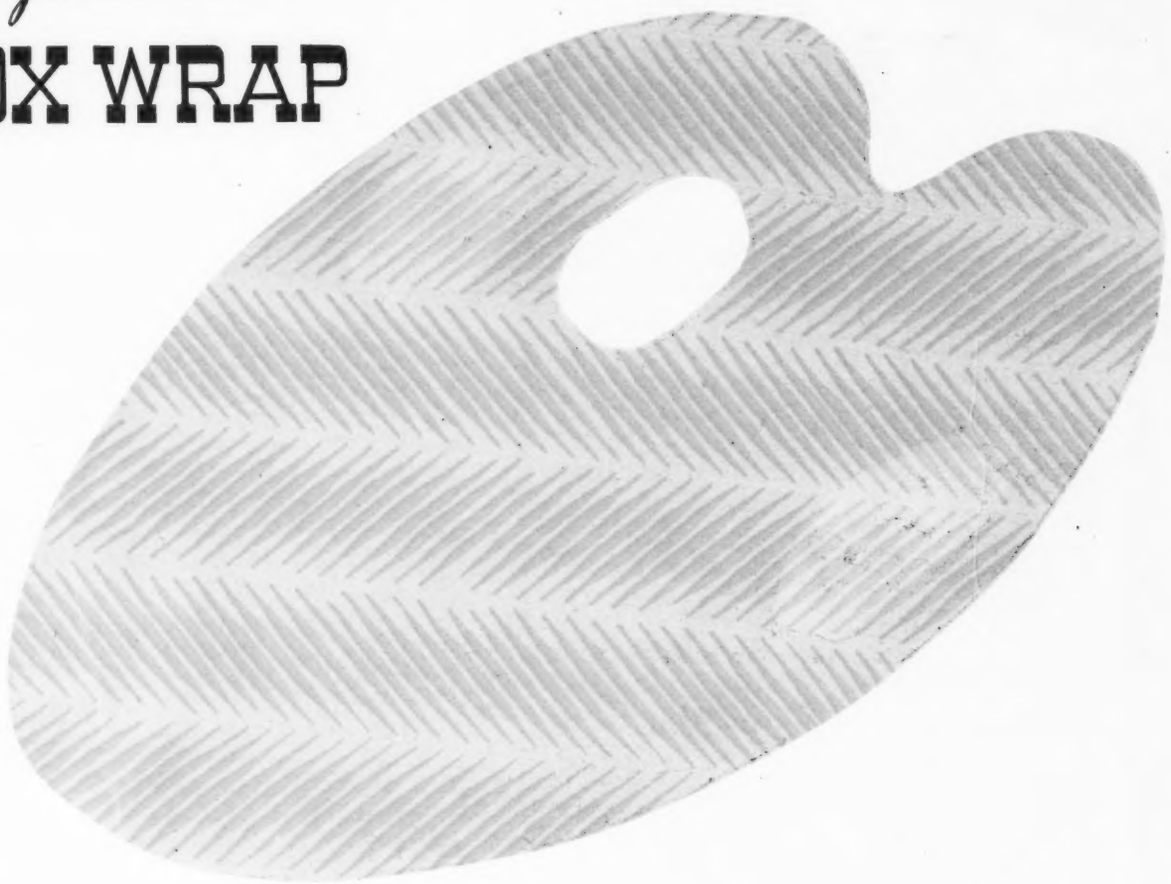
RIEGEL PAPER CORP., *Booths 32–3–4.* Packaging papers, with emphasis on anti-mycotic Diafane for tobacco products and specialty papers designed to reduce distribution costs. *Personnel:* A. G. Griswold, B. H. Ballard, C. W. Hoffman, E. G. Penn, R. A. Simpson, A. J. Ericsson. *Hotel:* Benjamin Franklin.

RODGERS CO., GEORGE C., *Booth 10.* Rodgers auger-type package filler. *Personnel:* Frank Craig, John Garvey, B. Rossner, S. M. Schuster. *Hotel:* Benjamin Franklin.

ROSS CO. A. H., INC., *Booth. 62.* Fully-automatic and semi-automatic cartoning machines. *Personnel:* H. F. Lampke, W. H. Ross, W. Burchett, A. G. Hornney, E. J. O'Brien, J. E. Lee. *Hotels:* Penn Sheraton and Bellevue-Stratford.

ROYAL & CO., THOMAS M., *Booth 208.* Pliofilm-lined, welded-seamed Flav-O-Tainer bag. *Personnel:* Gordon H. Friend, Sr., E. V. Ballard, Charles Bond, Rush B. Smith, R. G.

DECOTONE
Style Setter
BOX WRAP



YOUR BOXES will have more individuality dressed in one of DECOTONE's Style Setter Box Wraps. Visualize the tip-on's design, Spruce, on your boxes as an all-over in Blue, Green, Pink, Buff, or Gray — or with a contrasting cover in plain color. The number of smart combinations which can be attained with DECOTONE's Box Wrap lines is almost limitless.

Let us work out a compelling combination for your boxes. Our design department is exceptionally clever at this. No obligation. Write today!

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DIVISION

Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

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FOR ADHESION OF FOILS, CELLOPHANES, AND OTHER PRODUCTS USING WAXES AND HOT MELTS . . . Give us a description of the materials to be processed and the laminating agent you wish to use, and we will describe in detail the machine you will need for the job. Illustrated is our No. WL-2, which has met with wide acceptance because of its ability to properly laminate these products.

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OTHER THAN PRINTING

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Phone: CI 6-4233

Wylie, George Buchanan, Charles L. Condon, Carl L. Brickman. *Hotel:* Warwick.

SCHOETTLE CO., EDWIN J., *Booths 20–21.* Schoettle folding and setup boxes, and demonstration of high-production gluer and wrapper making setup boxes. *Personnel:* Douglas T. Neale, Karl R. Schoettle, C. Albert Sauter, Ralph T. Kent, H. K. Reifsnyder, J. L. Creekman, W. J. Haessler.

SHAW-RANDALL CO., *Booths 127–8.* All-transparent acetate, combination acetate and cardboard and Lucite packages for jewelry and toiletry fields. *Personnel:* Ada Huxford, Mr. and Mrs. C. K. Shaw, Jr., C. K. Shaw, Sr., Martin Hammond, George T. Genereux. *Hotel:* Warwick.

SHELLMAR PRODUCTS CORP., *Booth 402.* Packages and packaging materials, including bottle labels made from a lamination of printed acetate to paper, and frozen food bags with an inner protective heat-sealable film and an outer wall of printed kraft. *Personnel:* B. W. Martin, W. L. Moore, T. R. Baxter, R. L. Lee, C. A. Southwick, Jr., T. W. Koch. *Hotel:* Bellevue-Stratford.

SHERMAN PAPER PRODUCTS CORP., *Booth 610.* Applications of Corroflex (flexible corrugated paper) in interior and exterior packing, and of Corrodek, cushioning product, featuring an ice cream liner. *Personnel:* George Sherman, George H. Stucke, D. S. Roberts, E. W. Preston, Phillip Sheehan, B. Walter, Paul Thompson, A. G. Whitehead, J. Sheehan. *Hotels:* Benjamin Franklin and Penn Sheraton.

SPEEDRY PRODUCTS CO., INC., *Booth 70.* Speedry self-filling brushpen, brushpen marking devices, and translucent and opaque Instandry waterproof marking inks. *Personnel:* I. Townsend Price.

STANDARD-KNAPP CORP., *Booths 5–6.* M. McFaull, George Ingham.

STANFORD ENGINEERING CO., *Booth 139.* Web guides for paper cellophane and other rolled material. *Personnel:* W. T. Stanford, C. V. Quinn.

STOKES & SMITH CO., *Booths 601–2.* Samples of packages handled on various filling, packaging and wrapping machines; demonstration of Transwrap automatic packaging machine packing peanuts. *Personnel:* J. S. Stokes, C. E. Schaeffer, G. Z. Sutton, S. T. Brinton, L. G. Smith, C. H. Nitsch.

SYLVANIA DIV., American Viscose Corp., *Booths 501–2.* Sample packages wrapped in Sylvania cellophane. *Personnel:* J. G. Mohlman, T. O. Williams, Fred Andrews, John Adrian, Jr., E. V. Weston, Winston Wade, John M. Wells, E. M. Farris, A. J. Horgan, R. D. Handley. *Hotel:* Benjamin Franklin.

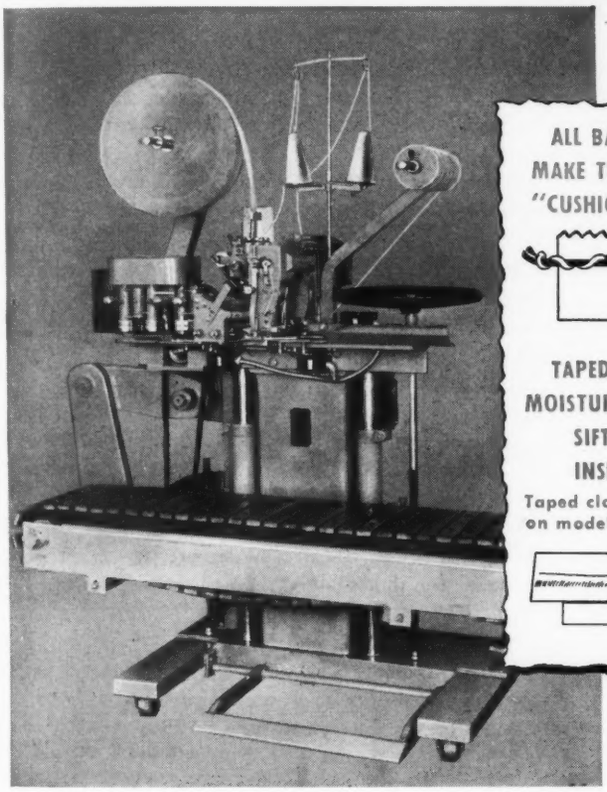
TOMPKINS LABEL SERVICE, *Booth 123.* Sample labels. *Personnel:* J. Kirby Tompkins, Floyd L. Tompkins, William H. Baile, Jr. *Hotel:* Bellevue-Stratford.

TRIANGLE PACKAGE MACHINERY CO., *Booth 508.* Several weighing and filling machines. *Personnel:* Louis R. Muskat, W. H. Splitt, O. L. May, R. M. Gantert. *Hotel:* Warwick.

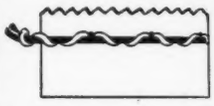
TWITCHELL, E. W., INC., *Booth 122.* Laminated and

here's your complete packaging operation!

BY BAGPAK*

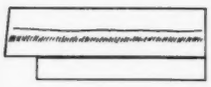


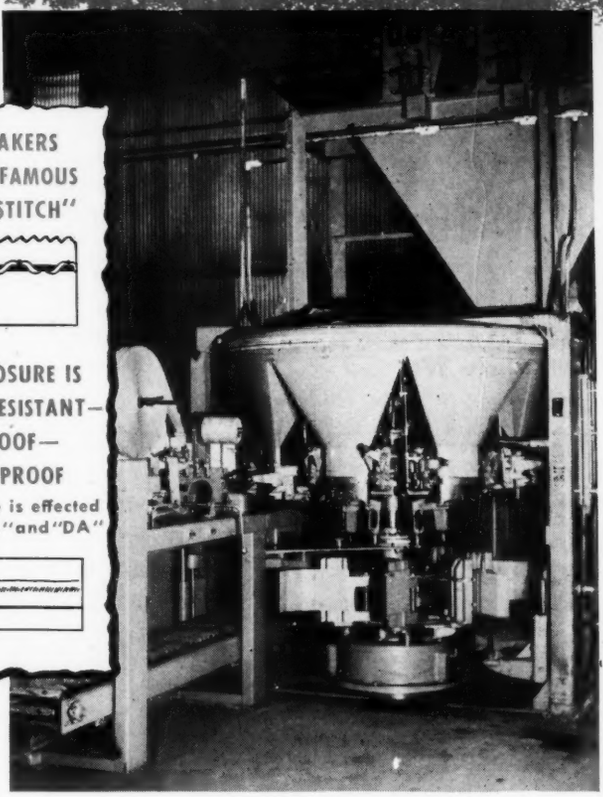
ALL BAGPAKERS MAKE THIS FAMOUS "CUSHION STITCH"



TAPED CLOSURE IS MOISTURE RESISTANT— SIFT PROOF— INSECT PROOF

Taped closure is effected on models "A" and "DA"





MODEL "D A" (portable)—One operator, filling and closing, can handle 2 to 4 100-lb. bags a minute . . . 6 to 12 a minute where filled bags are delivered to BAGPAKER conveyor (quickly adjustable for various bag sizes). Starting and stopping of sewing operation is automatic, no tape wasted.

MODEL "A"— Completely automatic — extremely accurate weighing. Saves on "give away" material, labor and bag costs, thus paying for itself quickly. Machine capable of filling and closing 100-lb. bags at the rate of 15 per minute . . . needs one operator.

At absolutely no obligation to you, a BAGPAK engineer will gladly discuss your packaging machinery and multiwall paper bag requirements . . . show you the best methods of weighing, closing and handling bags.

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coated papers: shelf paper, gift wraps, lampshade paper and specialties. *Personnel:* N. T. Gates, F. B. Miller.

UNION BAG & PAPER CORP., *Booth 411.* Variety of wet strength paper, ranging from window bags for fresh wet produce to heavy-duty multiwall bags. *Personnel:* Karl Smith, H. P. Lankenau, G. W. Donaldson, J. P. Duffy, E. M. Rickel, F. H. Meendsen, I. L. Hendricksen, R. Bennett, R. Shannon, L. Massey, L. Hiscox, L. H. Flacksenhaar, G. P. Haberstein, C. L. Woolsey, H. Recher, R. E. Read, W. H. Mellick, R. A. Mahaffy, W. O. Oschman, J. A. Pratt.

UNITED PAPERBOARD CO., *Booth 109.* Regular folding cartons, featuring hexagonal carton with lock and closure, and foil cartons. *Personnel:* P. M. Loddengaard, H. W. Kephart, S. D. Tompkins, F. C. Shina, James R. Scully. *Hotel:* Ritz-Carlton.

UNITED STATES AUTOMATIC BOX MACHINERY CO., INC., *Booths 509–10.* Automatic tablet bottling machine, requiring only one operator. *Personnel:* O. W. Wikstrom, A. C. Wikstrom, O. W. Wikstrom, Jr., John Fradenburgh, Charles Fasch, O. L. Weidmann, Clay Willingham, A. L. Holmes, Harry Krugh. *Hotel:* Warwick.

VAC-SPRAY MACHINE CORP., *Booth 317.* Labeling machine equipped with automatic feed and stand-up device. *Personnel:* Jay J. Golfus, Glen Hanson, Alvin Pietig. *Hotel:* Benjamin Franklin.

WARD, D. L., PAPER CO., *Booths 107–8.* Folding boxes, die cut parts, creped wadding, tape, trademarked tissue papers, etc. *Personnel:* J. D. Williams, R. H. Luff, G. Sparks.

WEINMAN BROTHERS, INC., *Booth 7.* Transparent plastic boxes, cans and counter dispensers, featuring Plasti-Form process for odd-shaped containers. *Personnel:* M. Weinman. *Hotel:* Benjamin Franklin.

WEST CO., *Booth 38.* Rubber and metal closures, Westcapping machine, applying of metal closures on pharmaceutical containers. *Personnel:* H. O. West, J. R. Wike, E. F. Anderson, L. H. Rohde, J. E. Underwood.

WESTERN PRODUCTS, INC., *Booth 521.* Transparent and opaque, laminated and coated packaging materials. *Personnel:* P. M. Gilfillan, J. H. Gauss, F. P. Winslow, Irving Grossman, B. W. Kelsey, W. T. Black.

WIREBOUND BOX MANUFACTURERS ASSN., *Booths 612–3.* Demonstration of construction, manufacturing and testing of wirebound boxes, implemented by model impact tester. *Personnel:* E. F. Gallivan. *Hotel:* Bellevue-Stratford.

WOODCRAFT PRODUCTS, *Booth 129.* Novelty wooden boxes with inlay design. *Personnel:* Irving A. Bloom, George Kessler.

WRAP-ADE MACHINE CO., INC., *Booth 40.* Demonstrations of Wrap-ade continuous heat sealer; Wrap-ade Model "B" power crimper, set up on a conveyor with a Spee-Dee package filler; Knapp-Wrapp automatic over-wrapping machine. *Personnel:* A. M. Powell, C. F. Van Sweringen. *Hotel:* Bellevue-Stratford.

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(or if it is even remotely related)

ELECTRIC RANGES	GAS RANGES
DEEPFREEZE UNITS	REFRIGERATORS
WATER HEATERS	OFFICE DESKS
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Bemis' sturdy kraft paper covers get these and many other products to market with easy handling, low shipping charges, and ample protection.

Bemis covers are slipped over the product in a jiffy to seal out dust and dirt. With this scuff-resistant cover, the product can be stored for months and be ready to go onto the display floor sparkling fresh at any time.

You can probably save substantial sums on shipping charges alone by talking with the Bemis Paper Bag Specialty Man.

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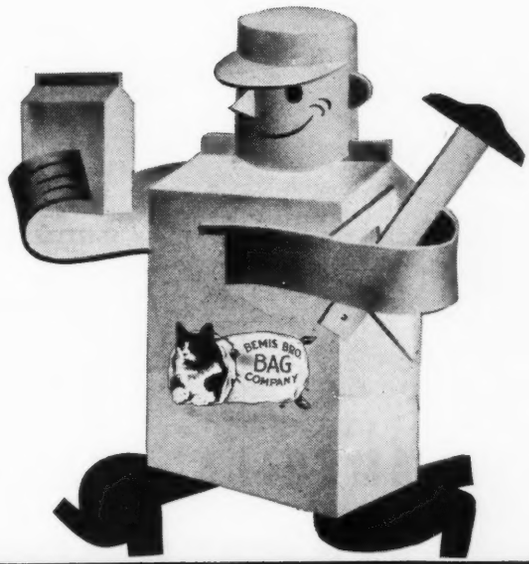
PAPER BAG SPECIALTY DIVISION • 1054 South Vandeventer, St. Louis, Mo.

Then...see how BEMIS can serve you with Good Packaging at Low Cost



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How can Bemis help cut packaging costs for our products? We manufacture_____

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Now, more than ever, it's vital to keep abreast of all the significant new machines, equipment, materials, ideas and techniques in the constantly developing field of packaging, packing and shipping. It's all available in one place and at one time at the 16th Packaging Exposition and concurrent Conference on Packaging, Packing and Shipping, sponsored by the American Management Association.

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PACKAGING EXPOSITION ★

CONVENTION HALL, PHILADELPHIA

★ APRIL 8 • 11, 1947

KIDDER POINTERS

No. 14.

Observations of trends and indications in packaging . . . noted by the manufacturers of Kidder "3 Point" Presses, Kidder Press Company, Inc., Dover, N. H.

Prospects for packaging materials are definitely brighter for '47 in nearly all categories. Production has risen in paper . . . cellophane . . . boxboard . . . closures . . . collapsible tubes . . . packaging machinery . . . aluminum foil . . . cans . . . rubber . . . plastics. Barring strikes, industry can look forward to a big year.

Resumé of modern packaging methods using latest materials and methods is the subject of an article in POPULAR SCIENCE. Everything from foods to airplane engine packaging is treated in interesting non-technical style.

Ice cream is being offered to the public in gallon containers at bargain prices by one leading manufacturer (Breyers) . . . partly because present prepackaging methods affect taste of pints and quarts . . . partly to prepare the way for volume sales to deep freeze users when they become more common. This latter consideration has resulted in the creation of special containers designed to fit freeze units.

Prepackaging . . . using latest plastic materials . . . has streamlined the organization of a supermarket in Wichita Falls, Texas . . . upped sales . . . cut down labor and overhead . . . eliminated "shrinkage".

Study by Cornell University shows that prepackaging better meets the needs of the consumer . . . reduces number of clerks . . . protects product . . . reduces waste . . . eliminates some work in preparation for the table . . . reduces transportation costs . . . stimulates sales.

Paper with greatly increased "wet-strength" which results when urea-formaldehyde or melamine resins are added to the pulp, is causing a revolution in paper packaging applications. Some ship cargoes were actually unloaded in an emergency by dumping the packages in the sea and letting them drift ashore.

Value of cellophane for inducing "impulse purchases" is brought out strongly in an article "Cellophane Guides The Food Shopper" (PACKAGES AND PEOPLE). A free booklet is offered containing data on a survey of "unplanned buying".

Packaging with cellophane has brought entirely new possibilities to Gloucester fish processors, who have expanded their business by freezing fillets which are now shipped to all parts of the country.

Pliofilm gives corn on cob shelf life of 23 days. Corn is now husked, wrapped, sealed "garden fresh" at the farm. Consumer boils it in the jacket to retain juices and flavor. Normal shelf life is 4 days for unhusked corn.

Cans and other metal parts can now be rust-proofed by new petroleum sprays which come in great variety of types . . . all are non-lacquer . . . water repellent . . . adhesive . . . applied cold. Some have a film thickness less than .005".

Prepackaging has gained public acceptance according to a poll of grocers and customers in 456 chain stores and 334 independents. Poll developed that 55 percent considered visibility "essential" for potatoes . . . 23 percent were "in favor" of visibility.

KIDDER PRESS COMPANY, INC., ***Printing Machinery,*** **Dover, N. H.**

WRAPPER ACHIEVEMENT OF THE MONTH
Designed especially for quick-selling eye appeal, these colorful wrappers are printed on Kidder Rotary 33-48 or 48-72 Presses to assure clean, clear-cut designs. Inks and waxes are the finest obtainable and the paper and printing must meet rigid, exacting specifications to maintain the high standard and quality demanded by the Central Waxed Paper Company. The red, white and blue balloons on a glossy, snow-white background make the Wonder Bread design of the Continental Baking Company outstanding in neatness and attractiveness. In the Krispy Crackers design for the Sunshine Bakeries, deep glossy coloring on a pure white background is arranged to combine billboard display and shelf-attention. For these waxed wrappers, Kidder salutes
CENTRAL WAXED PAPER COMPANY
Creators and Manufacturers of Quality Waxed Papers
Chicago, Illinois
WAXED PAPER PROTECTS FRESHNESS
KRISPY CRACKERS
Sunshine
KRISPY CRACKER
Sunshine KRISPYS CRACKERS
WONDER BREAD
SLICED
WEIGHT 1½ LBS.

MULTI-COLOR PRINTING IS RIGHT ONLY WHEN THE PRESS IS

A press is right only when it possesses the *three characteristics* identified by the Kidder "3 Point" trade-mark. These 3 qualities were originated by Kidder, have been built into Kidder Presses throughout the years, and are still synonymous with Kidder quality. That Kidder Presses do possess them is evidenced by the sustained popularity of:

KIDDER MULTI-COLOR PRESSES, chosen nationwide by about 90% of all bread wrapper converters.

KIDDER ANILINE-TYPE PRESSES, known prewar as "Aniliners" — for high-speed, high-quality runs – including the narrow "Celloprinter" primarily for Cellophane.

CONTROL OVER THE PAPER

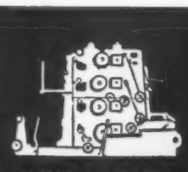
PROPER DISTRIBUTION OF INK

ACCURACY OF THE IMPRESSION

KIDDER
THREE POINT
PRESS

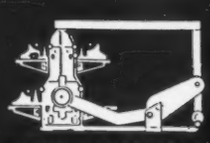
KIDDER

Manufacturer of "3 Point" Presses—so-called because they fulfill the three major requirements for perfect printing.



MULTI-COLOR LETTER PRESSES

for waxed paper, box wrappers, etc., rewound or sheet-delivered — up to 72 inches.



"ANILINER" and "CELLOPRINTER" MULTI-COLOR PRESSES

for decorative papers, cellophane, glassine, etc., — up to 65 inches.

SLITTERS AND REWINDERS

for paper mills, finishing rooms and small-roll, high-speed slitting up to 115 inches.

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The 1947 Modern Plastics Encyclopedia encompasses every phase and aspect of plastics. It is a year-round reference book, of inestimable value to the businessman, layman, engineer, designer, student, as well as manufacturer of plastics. This edition—the largest ever published—will reflect the increasing scope of the plastics industry. It will incorporate editorially all of the advances which have been made in plastics during the preceding year—in materials, machinery and techniques.

The Encyclopedia will revive all the prewar grandeur and beauty, the color and richness for which previous encyclopedias were famous. Published for the first time in three volumes, this edition will be boxed and sold as a single unit to allow for easier handling. It will contain 12 sections subdivided into 136 individual chapters.

Complete up-to-the-minute directories to every branch of the plastics industry will include molder's marks, trade names, raw materials, manufacturing facilities. The famous Modern Plastics Encyclopedia charts—always in demand—will be in a separate volume. A new chart on Properties of Fibers has been included this year as well as a new chart on Low Pressure Laminating Resins.

In short, the 1947 Modern Plastics Encyclopedia will be an unrivalled compendium of plastics . . . a must book for plastics users.

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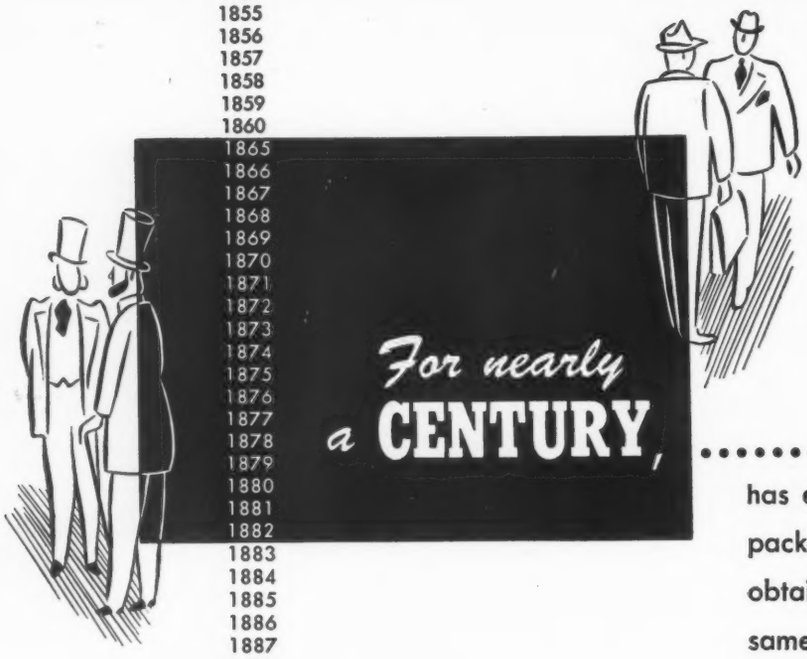

For nearly a **CENTURY,** ..... BUTTERFIELD-BARRY has enjoyed the reputation of supplying packagers with the finest paperboard obtainable. Today we carry on in the same tradition of quality and service — offering specialties such as Royal Satin, the peerless boxboard . . . for containers and set-up boxes . . . and Tredonia-lined board . . . the moisture-proof and grease-proof board for sturdy folding and set-up boxes. Containers made of Butterfield-Barry paperboard will do a top job for you in selling and protecting.

Because of the tremendous demand made upon us, it is not always possible to adequately serve the many requests made for our various products. We hope this situation will improve in the near future.

Distributors of

Folding Boxboard	Kraft Paper
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*For moisture and greaseproof packaging

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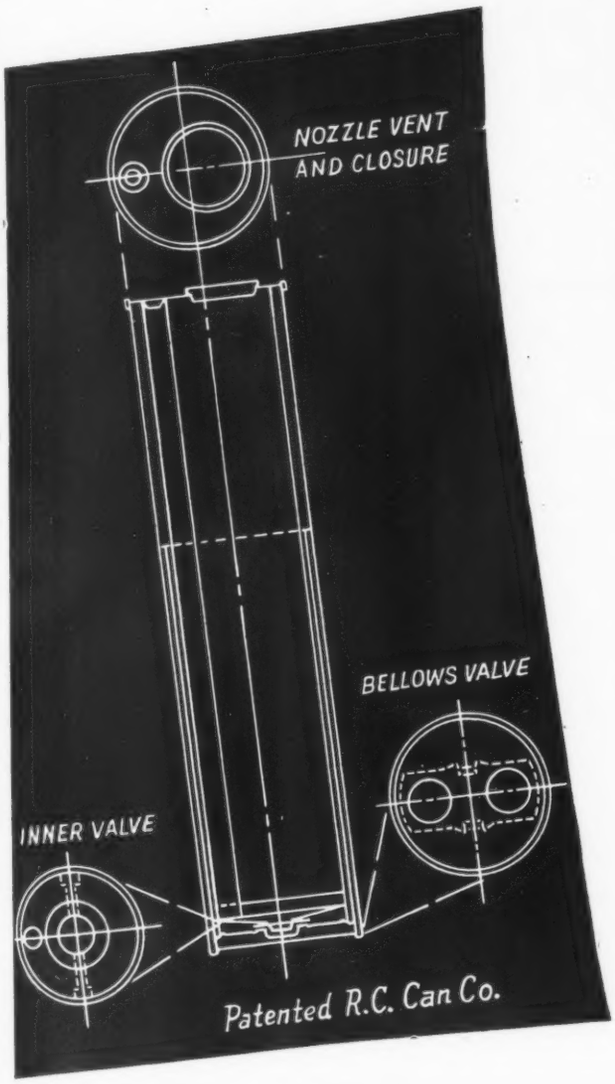
—yet another problem in design and manufacture

R. C. Spra-Can Container for non-abrasive dusting powders



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The Spra-Can container is a good example of the ingenuity of design and package-engineering skill that R. C. contributes to versatility in fibre can manufacture. It's the container with *action*—it operates in any position, at any angle, up or down. Those are a few of the features worked out by R. C. as well as right dimensions for volume and strength and good proportions for stacking, display and labeling surface.

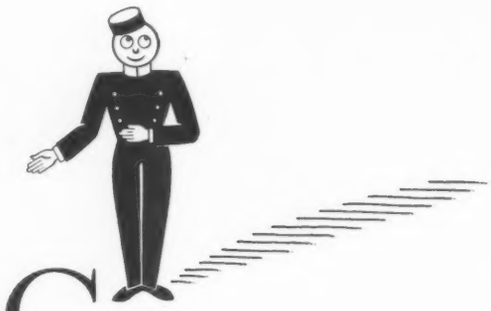
Get in touch with us about your packaging problems and plans.

R·C · CAN COMPANY

R.C. CAN CO. The Stamp of Quality ST. LOUIS, MO.

Manufactures fibre cans, tubes, spools and cores

Branch Factories: Arlington, Texas, Rittman, Ohio and Kansas City, Mo.
Sales Offices: Minneapolis, New Orleans, Atlanta, Memphis, Milwaukee, Louisville, New York, Pittsburgh, Denver and Los Angeles.



CONSOLIDATED LITHOGRAPHING CORPORATION

cordially invites you to visit its exhibit at the

PACKAGING EXPOSITION IN PHILADELPHIA

APRIL 8-11, 1947

We welcome this opportunity to acquaint you with our numerous services.

Our representatives at booth 408 will answer questions and explain our particular approach to the present day problems of marketing, and how we are equipped to create tools for selling which will facilitate the flow of products through your channels of distribution.

***CONSOLIDATED** Lithographing Corporation*

1013 GRAND STREET, BROOKLYN 6, NEW YORK

DISPLAYS • DEALER HELPS
LABELS • BANDS • WRAPS

The First *Impression*

is the most important

NOTHING DRESSES UP your product as effectively as the *right* paper bag . . . designed and printed to stress your important selling angles . . . tailored to meet your specific needs.

Lay your packaging problem in the laps of Union's experts. They'll study your operation from assembly line to consumer. They'll build the *right* bag and test it for shipping and selling. They'll show you promotion possibilities in paper bags you've never known before.

The resources and experience of the largest maker of paper bag packaging are yours on request.

UNION BAG AND PAPER CORPORATION

WOOLWORTH BUILDING • NEW YORK

Packaging's last job is of **FIRST** *Importance*

Manufactured under Bronander Patents

SCANDIA wraps control moisture to keep your product FRESH . . .

Whether you use glassine or cellophane to retain products in prime condition, never select your high-speed wrapper until you've seen WHAT a Scandia machine does for you, and how *economically it functions*, year in; year out!

Scandia Manufacturing Co.

NORTH ARLINGTON NEW JERSEY

Are you measuring the distance between manufacturer and consumer as your straight line packaging costs in which such variables as ease of packaging, safety in shipment, product display and consumer appeal are paramount measurements to your container selection? If you are weighing these factors in your packaging costs, the chances are that you are going along with a host of other manufacturers who are switching to set-up paper boxes — the custom-built package for your product. Its very versatility offers you more answers to your packaging problems — added economy, too.

You can obtain expert packaging advice from your nearest set-up box manufacturer, or write department 104, National Paper Box Manufacturers Association, Liberty Trust Building, Philadelphia 7, Pennsylvania.

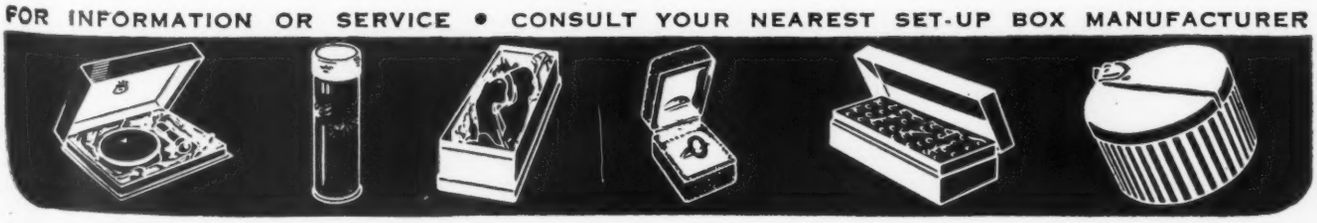
Dept. 104

NATIONAL PAPER BOX MANUFACTURERS
Association

AND COOPERATING SUPPLIERS

Liberty Trust Building • Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER



SMITH CRAFTED CHICAGO

Packages that enhance the value and desirability of the Merchandise Content—

Whether that Merchandise be strictly utilitarian or beauty enhancing—

Packages that represent almost any shape, size, form, color or design idea—

Packages that by their own re-use durability immediately suggest a definite, intrinsic value that insures their being kept for years as a daily reminder of their original merchandise content—

SMITHCRAFTED in the only plant of its kind—by the only organization of craftsmen capable of doing that kind of a job—whether the purpose behind the package is to "Gift Package" candy, fruit cake, soap, fine wines or liquors, quality tobacco and cigarettes, De Luxe food products, hosiery and lingerie, golf and tennis balls, cosmetics and toiletries, fine stationery and papetries, sewing accessories and a host of other items too numerous to mention.

All made to your order, individualized and exclusively yours.

Represented at the Packaging Show Exposition, Booth 119 in Philadelphia.

See samples of these outstanding examples of Quality Re-Use packaging ideas there if you come to Philadelphia — or write nearest office for information.

THE S. K. SMITH COMPANY

Plant and General Offices

2857 NORTH WESTERN AVENUE, CHICAGO 18, ILL.

Sales Offices

52 Vanderbilt Ave., New York 17, N. Y.
509 Fairfax Ave., Los Angeles 36, Cal.

The **CHANWALL...**

NEW... SENSATIONAL

For

CONTINUOUS PACKAGING of NON FREE FLOWING POWDER & CRYSTALS

INDIVIDUAL PACKETS OF ALL PACKAGING MATERIALS OR COMBINATION OF MATERIALS FOR EITHER

HEAT SEALING

or

ADHESIVES

IDEAL FOR SAMPLE PACKAGING,

CHEMICAL • PHARMACEUTICAL • COSMETIC • FOOD PACKETS

PACKAGING INDUSTRIES, INC.

Designers • Consultants • Equipment

50 CHURCH STREET MONTCLAIR, N. J.

See machine in operation— Booth 523-4 PACKAGING EXPOSITION

A PEEK-PREVIEW . . .

a Few of the Famous

HARLICH LEATHERETTE RE-USE CONTAINERS

That Will Be on Display in Our Booth at the Packaging Exposition

CONVENTION HALL
Philadelphia
April 8th to 11th, 1947

Booth No. 607

You will be interested in seeing examples of Harlich Workmanship and in learning more about Harlich facilities and services.

Your needs can be served by our huge, modern manufacturing organization that includes an abundance of the most advanced mechanical equipment and skilled personnel.

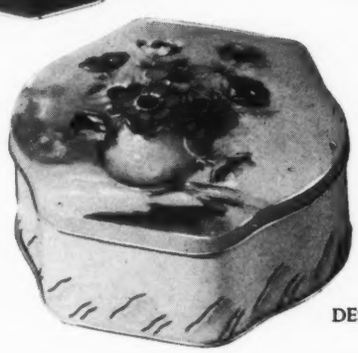
BE SURE TO PUT
BOOTH No. 607
ON YOUR "MUST" LIST

HARLICH MFG. CO.
1200 North Homan Avenue
Chicago 51, Illinois

DOUBLE YOUR PRODUCT'S VALUE

WITH THESE *English Boxes*

IN FULL COLOR



Irresistible salesmakers, these beautifully decorated and embossed aluminum and metal boxes are richly tooled and carefully finished by master craftsmen, inside and bottom gold lacquered or enameled. Many of the covers are double lined in treasure-chest style. Each box is an exquisite collector's item and yet is utility designed for use afterwards as

COOKIE JARS • JEWEL BOXES • SEWING KITS
CANDY DISHES • KNICK KNACKS • NOOK NOVELTIES
CIGARETTE BOXES • HUMIDORS • COSMETIC KITS

A selection of over 20 styles

DESCRIPTION OF ENTIRE LINE ON REQUEST. SEND FOR CATALOG A

CONTAINER DIVISION *I. D. Company, Inc.*

150 SPRING STREET • NEW YORK 12, NEW YORK

A SALE IS BORN....

—through more *attractive*, more *effective* packaging materials. Materials that combine eye-catching appeal with matchless quality. Materials that make a package easy to display—to SELL!

We have available vast stocks of *better* packaging materials of every possible type and texture to suit your needs. For the inside *and* the outside of a package. Write us today—or better still, visit our showrooms and discuss your problems with our skilled specialists.

★

For the inside *and* the outside of YOUR packages:

Satins
Bengalines
Velvets
Leatherettes
Taffetas
Duvetyns
Cellulose Acetates
Fabcose
Facil-Fab
Floral Papers
Velour Papers
Foil Papers
Rayon Flocked Materials

"The House of Service"

MAHARAM
FABRIC CORPORATION

NEW YORK—130 W. 46th St. • CHICAGO—6 E. Lake St. • LOS ANGELES—1113 So. Los Angeles St.

INKS FOR THOSE NEW HARD-TO-PRINT SURFACES...

To meet new problems of printing on synthetic materials for packaging, IPI is carrying on a program of fundamental ink research which has resulted in the development of inks for use on a wide variety of hard-to-print surfaces.

Anilox, the 100% pigment ink for use on aniline and Anilox type presses, makes possible sharper, light-fast reproductions on coated board, glassine, acetate, foil, and even the more highly plasticized grades of cellophane.*

IPI inks for Plastics and Glass have been developed for use on all types of plastic and glass surfaces taking into consideration the process to be used and the end use of the printed surface.

IPI technicians and service representatives are equipped to help you at all times with your package printing problems. Write: International Printing Ink, Division of Interchemical Corporation, 350 Fifth Avenue, New York 1, N. Y.

PLASTICS, FOILS, ACETATES

OTHER IPI PRODUCTS FOR PACKAGE PRODUCTION

FOR COLORING PLASTICS— Fast, easy to use dip solution for coloring thermoplastics.

[illegible]POSET* INKS — Instant drying. The closest to an odorless printing ink yet achieved.

[illegible] OFFSET LITHOGRAPHY — New improved inks. A complete line of offset supplies.

VAPORIN* — Instant drying ink for high speed bag printing.

IPI COLOR CONTROL SERVICE — Sets up color standards. A method of maintaining color uniformity for package printing.

*Reg. U. S. Pat. Off.

Photo by Morris Rosenfeld **A BILGEBOARD SCOW** (the fastest sailing boat ever built)

Smooth Sailing

WITH THE SCHOETTLE INDUSTRIES

EDWIN J. SCHOETTLE COMPANY
533 North 11th Street, Philadelphia 23, Penna.
Manufacturers of quality folding and set-up boxes.

JOHN CROMPTON ADELPHIA CORP.
145 W. Columbia Avenue, Philadelphia 22, Pa.

F. SCHOETTLE, INC.
176 W. Louden Street, Philadelphia 20, Pa.

CENTRAL PAPER BOX COMPANY
225 E. Grant Street, Lancaster, Penna.
Producers of set-up boxes of character and distinction.

HIGH PRODUCTION MACHINE CO., INC.
533 North 11th Street, Philadelphia 23, Penna.
Wrapping machines and glue applying machines for paper box makers, box users and all other firms requiring gummed papers automatically fed and ready for use.

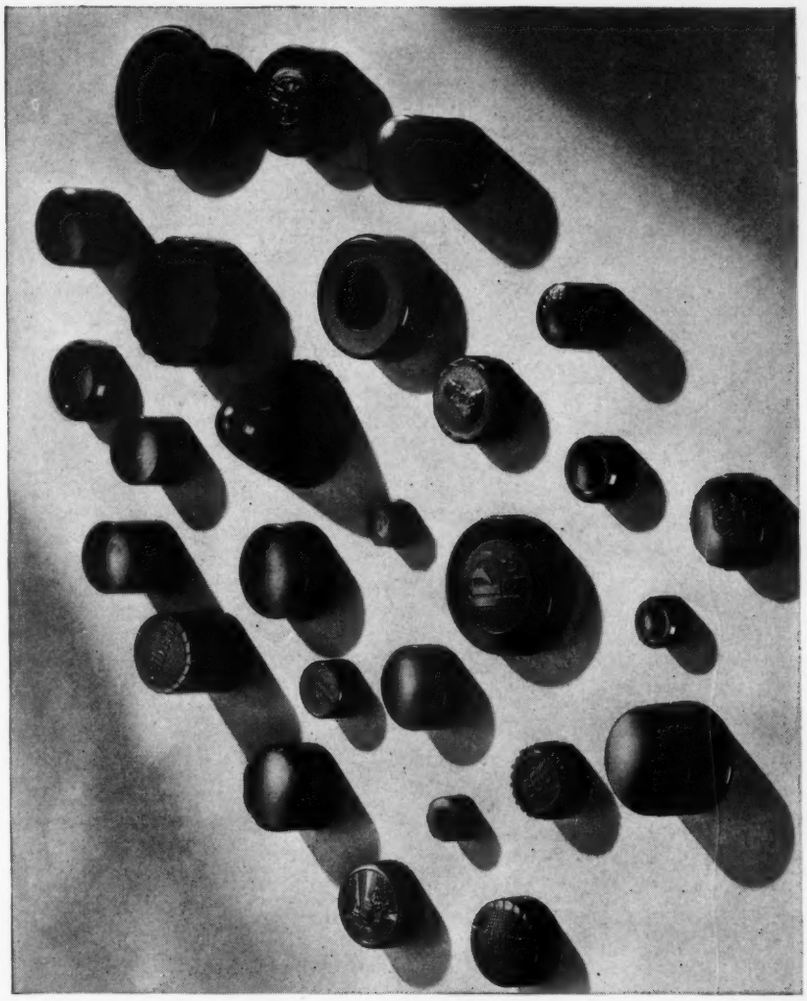
PRECISION MANUFACTURING COMPANY
533 North 11th Street, Philadelphia 23, Penna.
Engineering and precision machine manufacturing.

DENTIGEN COMPANY
533 North 11th Street, Philadelphia 23, Penna.
Manufacturers of tools and dies requiring great precision and durability.

You are cordially invited to visit the Schoettle Industries Exhibit at the Packaging Exhibition, Convention Hall, Philadelphia, Penna., April 8–11, 1947, BOOTHS #20 and 21.

The latest model High Production Wrapping machine and Gluer will be demonstrated in action.

ARMSTRONG answers "CAN YOU TOP THIS?" - with versatile DUREZ



"Can you top this?" is one question that does not stop the Glass and Closure Division of the Armstrong Cork Company. In this group of Artmold closures, Armstrong has produced "tops" for some of the most famous packages in America. All are molded of Durez, and together they suggest the infinite design possibilities of molded phenolic plastic construction.

For pills or perfume, whiskey or water, lotion or liver extract—a Durez closure just naturally fits into the picture with what you want—a glossy, lustrous finish that points up the beauty and "feel" of the original design. It helps sales because it says to all who see, "This product has quality!"

New Fields in Design

Durez long ago opened up new package design fields by developing specially formulated closure materials. With a diversity of finishes, adequate strength, immunity to alcohol and other deteriorating agents, Durez offers excellent moldability and is easily formable to unusual design. Continuous research has maintained the prominence of Durez in this field.

Our long experience as specialists in phenolics should be a good starting point in solving some of your problems. Call on us freely. Durez Plastics & Chemicals, Inc., 253 Walck Road, North Tonawanda, New York.

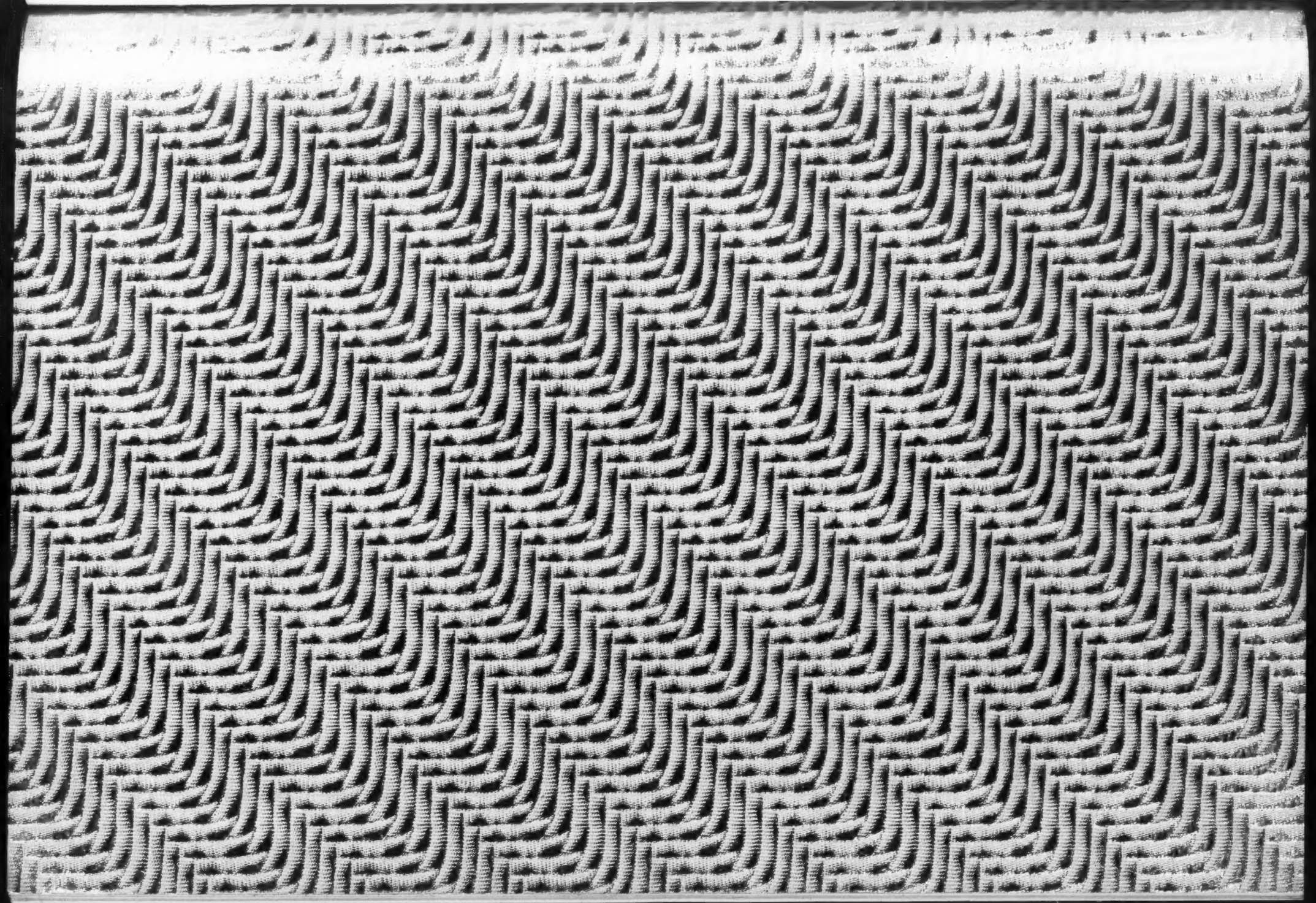
DUREZ

PHENOLIC RESINS

- MOLDING COMPOUNDS
- INDUSTRIAL RESINS
- PROTECTIVE COATING RESINS

PHENOLIC PLASTICS THAT FIT THE JOB

SPONSORED BY MODERN PACKAGING



Foil is striking.

Foil is beautiful.

Foil is Strikingly Beautiful!

if

it's

Renaissant Foil (307)

by

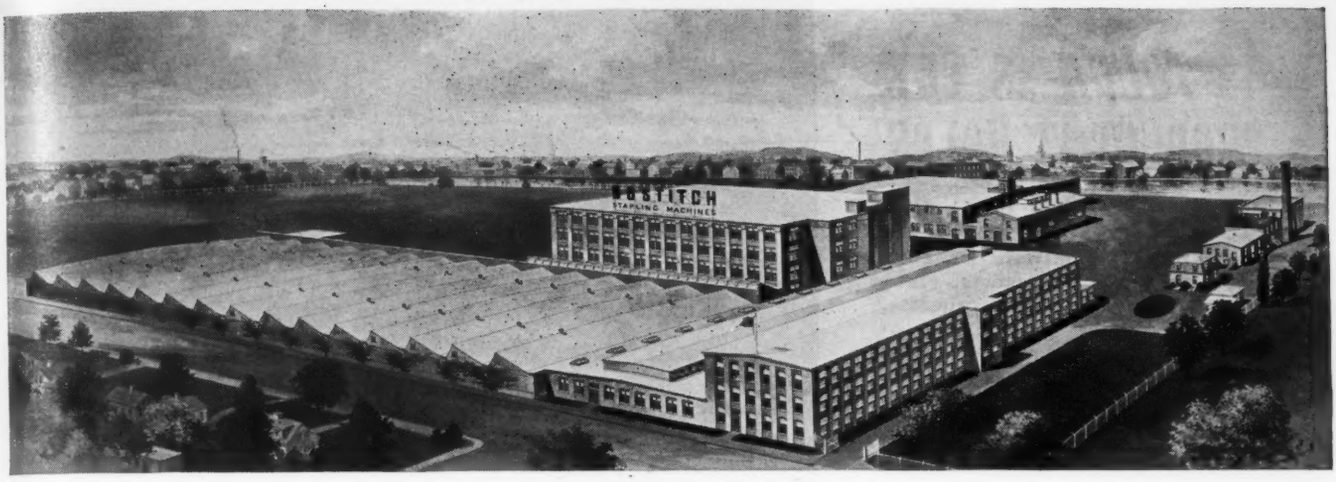
Hampden.

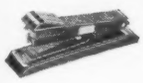
HAMPDEN GLAZED PAPER AND CARD COMPANY - - Holyoke, Massachusetts

CHICAGO, ILL. TORONTO, CANADA PHILADELPHIA, PENNA.

DALLAS, TEXAS FRED'K. JOHNSON & CO. LTD. LONDON, ENGLAND SAN FRANCISCO, CALIF.

NEW YORK, N. Y. SEATTLE, WASH.





Here's NEWS in the Field of Stitching

Double-Barreled Announcement by Bostitch

1. **The Stitcher Department of Dexter Folder Company has been taken over by Bostitch.**

2. **Bostitch has more than doubled its capacity by moving into a new plant at Westerly, Rhode Island.**

The Sales and Service men of the Dexter Stitcher Department, combined with our own force, both specializing exclusively in fastening problems, strengthens our ability to give broader, better service.

For years, the stitchers sold by Dexter Folder Company have been manufactured by Bostitch. The new arrangement gives us more direct contact with our users and provides them, in turn, with more personal contact with our organization.

We have been moving for several months, in order not to disrupt production, and are now located in our new plant at Westerly, R. I. This has more than doubled our capacity and we are taking care of orders as fast as sufficient materials become available.

No matter what materials you fasten:—plastics, cloth, wood, paper, leather, or even metal . . . one of the 800 Bostitch machines may do it better and faster with wire. Skilled research engineers and 250 field men in 91 key cities offer you the benefits of 50 years' stitching and stapling experience.

Why not take advantage of this? Send description of your fastening problem or ask for folder applying to your industry.

BOSTITCH

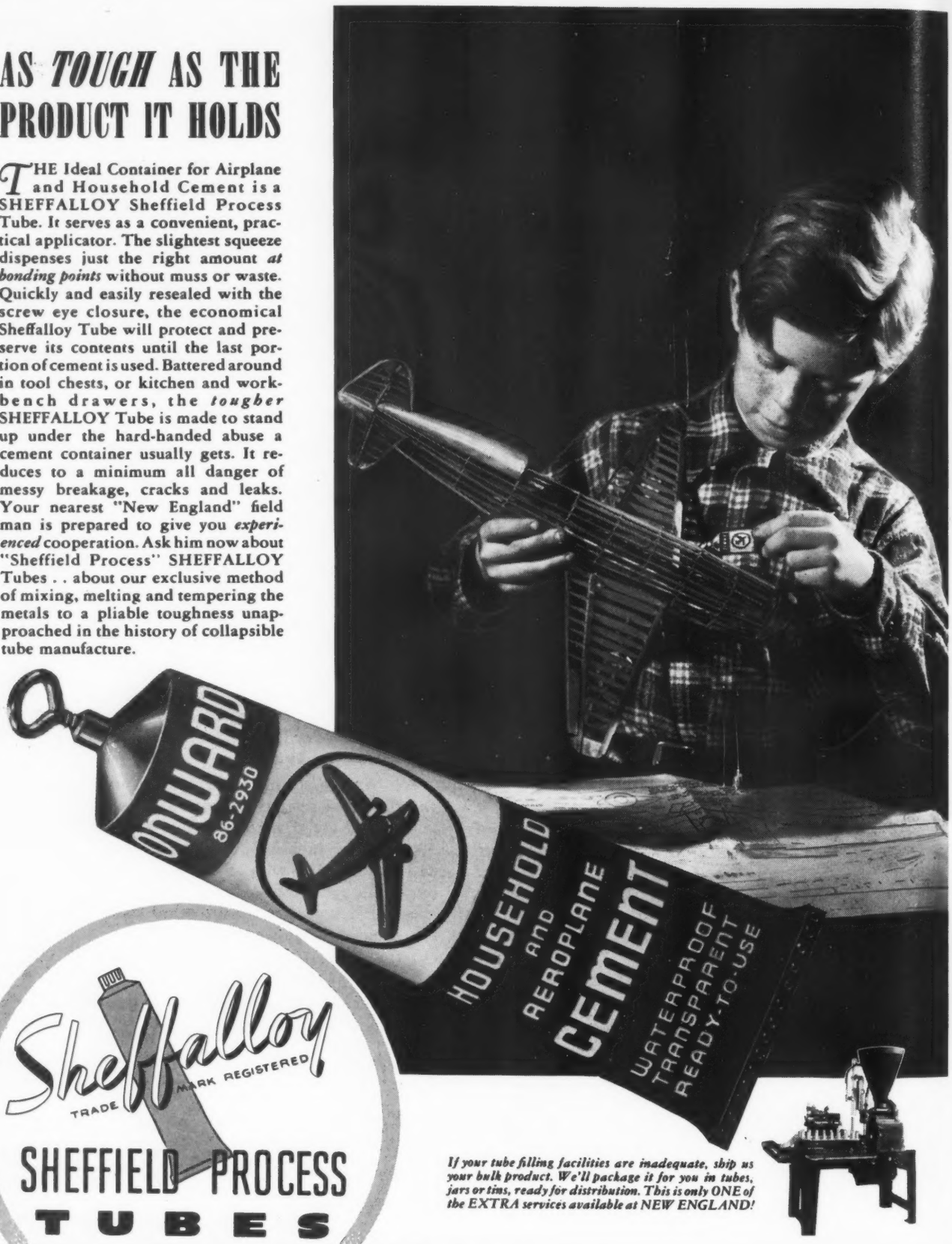
fastens it better, AND FASTER with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINE

BOSTITCH 506 MECHANIC ST. WESTERLY, R. I.

AS *TOUGH* AS THE PRODUCT IT HOLDS

THE Ideal Container for Airplane and Household Cement is a SHEFFALLOY Sheffield Process Tube. It serves as a convenient, practical applicator. The slightest squeeze dispenses just the right amount *at bonding points* without muss or waste. Quickly and easily resealed with the screw eye closure, the economical Sheffalloy Tube will protect and preserve its contents until the last portion of cement is used. Battered around in tool chests, or kitchen and workbench drawers, the *tougher* SHEFFALLOY Tube is made to stand up under the hard-handed abuse a cement container usually gets. It reduces to a minimum all danger of messy breakage, cracks and leaks. Your nearest "New England" field man is prepared to give you *experienced* cooperation. Ask him now about "Sheffield Process" SHEFFALLOY Tubes . . about our exclusive method of mixing, melting and tempering the metals to a pliable toughness unapproached in the history of collapsible tube manufacture.



Sheffalloy
TRADE MARK REGISTERED

SHEFFIELD PROCESS
TUBES

If your tube filling facilities are inadequate, ship us your bulk product. We'll package it for you in tubes, jars or tins, ready for distribution. This is only ONE of the EXTRA services available at NEW ENGLAND!

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL ST., CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVE., NEW YORK 18
T. C. SHEFFIELD, 7024 MELROSE AVE., LOS ANGELES 38 • C. W. MILLER, 151 COLE ST., SAN FRANCISCO 17
EXPORT DEPT: 500 FIFTH AVE., NEW YORK 18; CABLE "DENTIFRICE", NEW YORK

THIS

is a container...

Sounds simple. But it's not so simple when a lack of 'em holds up production. That's *our* cue . . . as it has been for years of serving industry. We supply (and buy, too) containers and caps: *All* sizes, shapes, quantities up to and including carloads. Chances are we've got what you need—or better. Check by calling or writing today. You'll get a time-saving price quotation at the same time.

GLASS

CONTAINER & CAP OUTLET CO.

876 BROADWAY
NEW YORK 3, N. Y.

OFFICES IN: **LOS ANGELES** **CHICAGO** **MONTREAL** **NEW YORK**

Specialized Audiences for Your Advertising

and How to Reach Them

TO keep abreast with constantly changing conditions and new developments in the fields of industry, science and the arts, forward-looking men and women read business papers and professional journals. In addition to the editorial content, the informative advertising in these publications is today a major source of factual news and helpful working material.

Advertising in business papers makes it possible to reach specialized audiences with specialized messages. In order to select the right media and to adapt messages to the interests of the subscribers, advertisers need the information in A.B.C. reports. Paragraph 10 in these reports, for example, gives a breakdown of the paid subscribers by occupation or business. Other questions essential to successful business paper advertising and answered by the information in A.B.C. reports: How much paid circulation? How much unpaid? How was circulation obtained? What do people pay for it? How many subscribers are in arrears? What is the renewal percentage? Where does the circulation go?

With the answers to these questions, advertisers are in a position to evaluate media and to write advertising of interest to the specialized groups that receive the publication. Always make A.B.C. reports your starting point in buying advertising space. This paper is a member of the Audit Bureau of Circulations. Ask for our A.B.C. report and then study it.

SEND THE RIGHT MESSAGE TO THE RIGHT PEOPLE

Paid subscriptions and renewals, as defined by A.B.C. standards, indicate a reader audience that has responded to a publication's editorial appeal. With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

MODERN PACKAGING

ABC = *AUDIT BUREAU OF CIRCULATIONS* = *Facts as the Basic Yardstick of Advertising Value*

HAVE YOU NOTICED THAT

The Finest Foods have the Finest

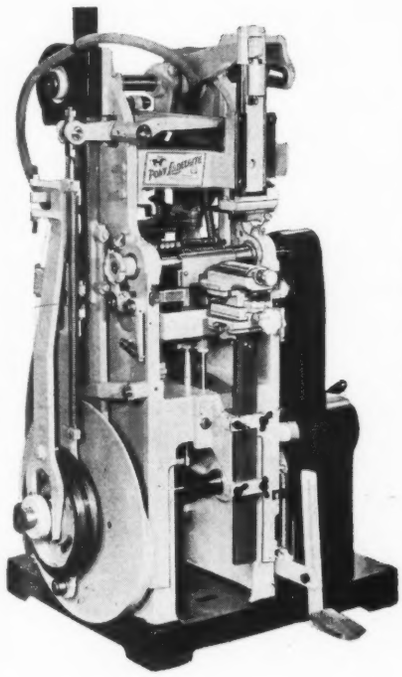
LABELING ?

and the finest kind of **PRECISION** *labeling with "no wiping of containers" is done on the*

PONY LABELRITE*

PERFECT REGISTER
NO GLUE SEEPAGE
NO BOTTLE WIPING
ALL EDGES GLUED DOWN

* Reg. U. S. Pat. Off.



Give the Credit to the Pony's

VACUUM LABEL-FEED *and* **TWIN-ROLLER GLUE CONTROL**

Label is immovably held by vacuum, as it travels from hopper to container, across glue-roller *in a straight line.* Perfect alignment between hopper and container makes PERFECT REGISTER certain.

Micro-film of adhesive prevents *any* excess glue on labels. Provides immaculate labeling and NO WIPING OF CONTAINERS is required.

NEW JERSEY MACHINE corporation

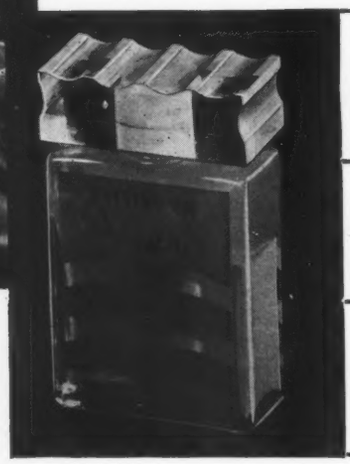
1510 Willow Ave. HOBOKEN, N. J.

Chicago Office — 325 West Huron St.

Cincinnati Office — 1701 Carew Tower

Export Division — 44 Whitehall St., New York 4, N. Y.

Decorators and Printers



Creative means the finest decoration on your glass, plastic or metal container —

Creative means unlimited production facilities —

Creative means an expert technical staff to solve your printing problem.

Creative

PRINTMAKERS, INC.

200 VARICK STREET, NEW YORK 14, N. Y. • WALKER 5-6300

SURFACE DECORATORS FOR THE PACKAGING FIELD

In Canada: 2424 Yonge Street, Toronto, Ontario

FINISHING

FOR PRINTERS AND LITHOGRAPHERS

- Varnishing
- Lacquering
- Embossing
- Gumming
- Pebbling
- Die Cutting
- Straight Cutting

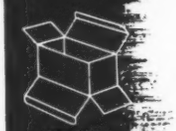
High Gloss Offset Coating and Ultra Gloss for Offset Stock

Lithographers'

FINISHING COMPANY

224 Centre Street
New York 13, N. Y.
CAnal 6-5171-2

WESTERN CARTON CO. FOLDING CARTONS KALAMAZOO, MICHIGAN



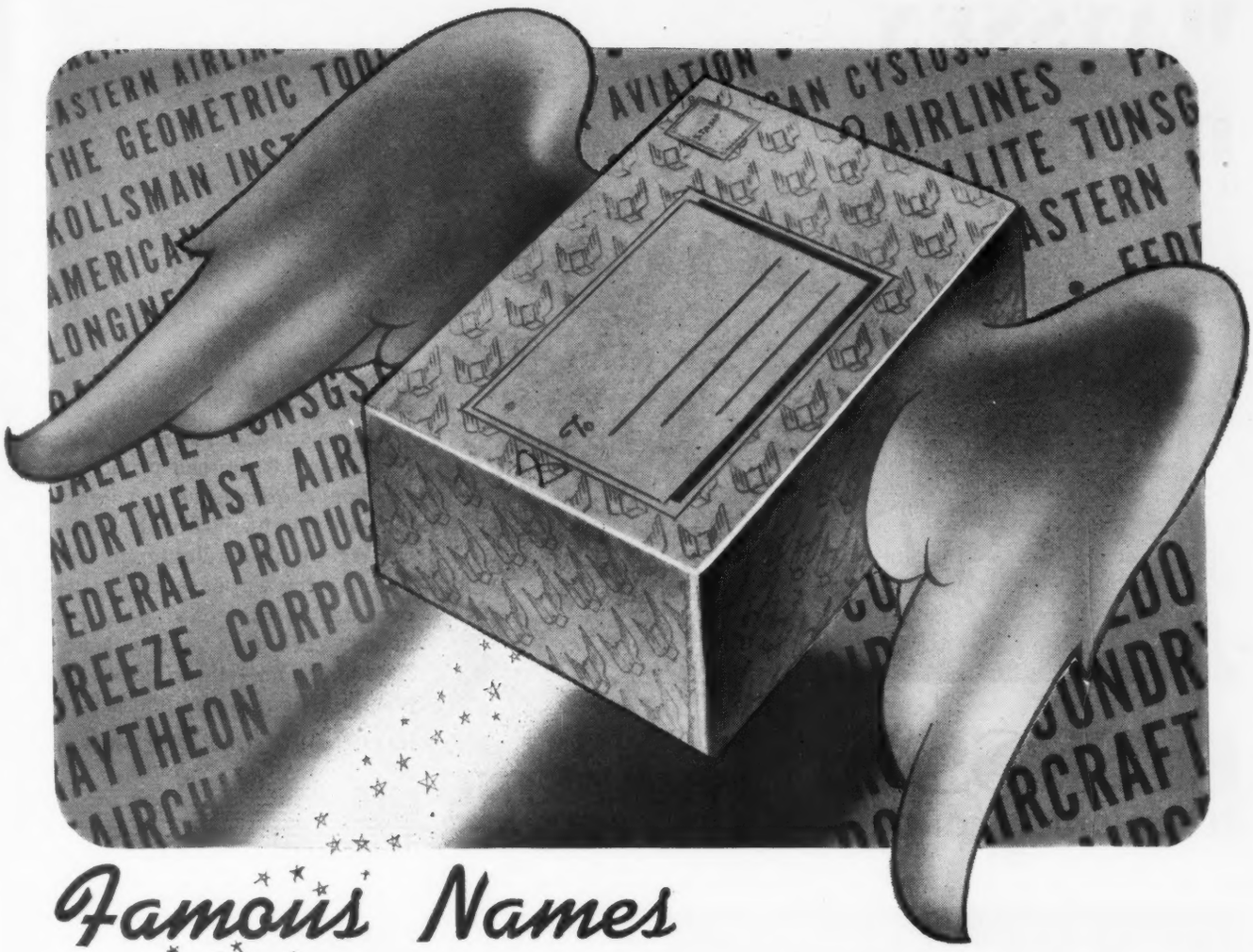
MANUFACTURERS OF

FOLDING CARTONS • WINDOW & COUNTER DISPLAYS • DIE CUT SET-UP BOX BLANKS • PAPER CARRIERS • 2 PC. FLATS FOR STITCHED OR METAL EDGE CARTONS • DIE CUT INSERTS FOR TANGIBLE MERCHANDISE • SUIT & MILLINERY CARTONS • BAKERY CARTONS • PARCEL POST SHIPPERS • PARTITIONS OF ALL TYPES

WESTERN CARTON COMPANY

KING HIGHWAY
KALAMAZOO, MICHIGAN

CREATORS – DESIGNERS OF DISTINCTIVE PACKAGING AND SPECIALTIES
CHICAGO SALES OFFICE – 737 NORTH MICHIGAN AVE. – PHONE SUPERIOR 3038-3039

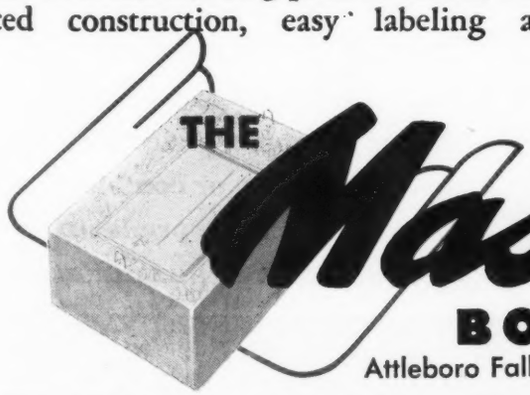


Famous Names

. . . AND FASTER SHIPPING!

It's a pretty safe bet that if your company is one of those famous names that make American industry move faster, you have already used the famous Mason MailMaster — the lightweight, really safe shipping package. If you are not, now is the time to investigate the possibilities that can be made by faster shipping with Mason MailMasters. Their convenient, snag-proof closure, reinforced construction, easy labeling and convenient packing, are but a few of the advantages of America's Number One mailing box . . . leader in air mail shipments. This convenient container is the versatile economy package of many famous names throughout the world.

Write today for sample and complete catalog of standard sizes. Mason MailMasters also come in trade-mark designs and special sizes made to product specifications.



If your shipping department would like a full size parcel post and zone guide, printed on heavy paper board stock with metal edges, which lists 110 leading cities in the United States, send 50c in stamps with your business letterhead to department Mason Box Company, Attleboro Falls, Mass.

(Dept. 60)

THE Mason BOX COMPANY

Attleboro Falls, Mass. • 175 Fifth Ave., New York City, N. Y.

MANUFACTURERS OF AMERICA'S NUMBER ONE BOX . . . THE MASON MAILMASTER

HAYSSEN

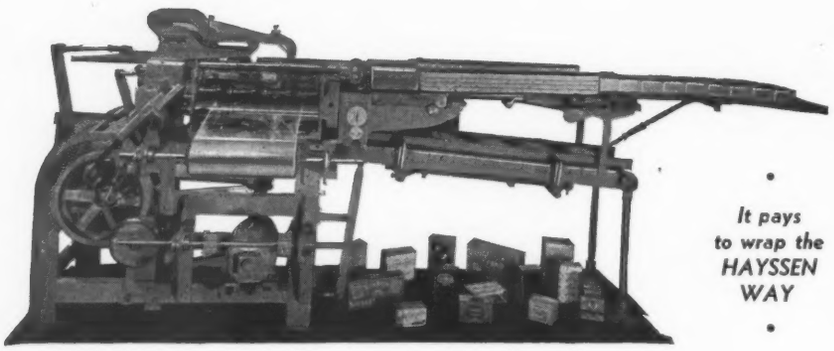
for high speed low cost wrapping

HAYSSEN

for easy handling of many sizes

HAYSSEN

the machine you will want to use



It pays to wrap the HAYSSEN WAY

Now that the Buyers' Market has arrived, salesmanship in the form of package appearance is of paramount importance. In self-service stores, your package must sell on sight. Can it meet this test? The Hayssen Carton Wrapping Machine will help you improve the appearance, as well as provide the protection your product needs. Let the factory send you Hayssen Facts — the Hayssen may be just the machine you need.

HAYSSEN MFG. COMPANY • Sheboygan, Wis.

HAYSSEN ELECTRONIC CONTROLLED WRAPPING MACHINES

CUT YOUR PACKAGING COSTS!

Thomas L. Jefferson and Associates, expert packaging consultants, offer a 4-point packaging program on planning, preparing and producing your perfect package — economically.

1. We analyze your market to insure proper sales appeal for your products.
2. We select and secure your packaging materials.
3. We design your package for maximum protection, salability and display.
4. We secure your packaging machinery to assure economical manufacturing costs.

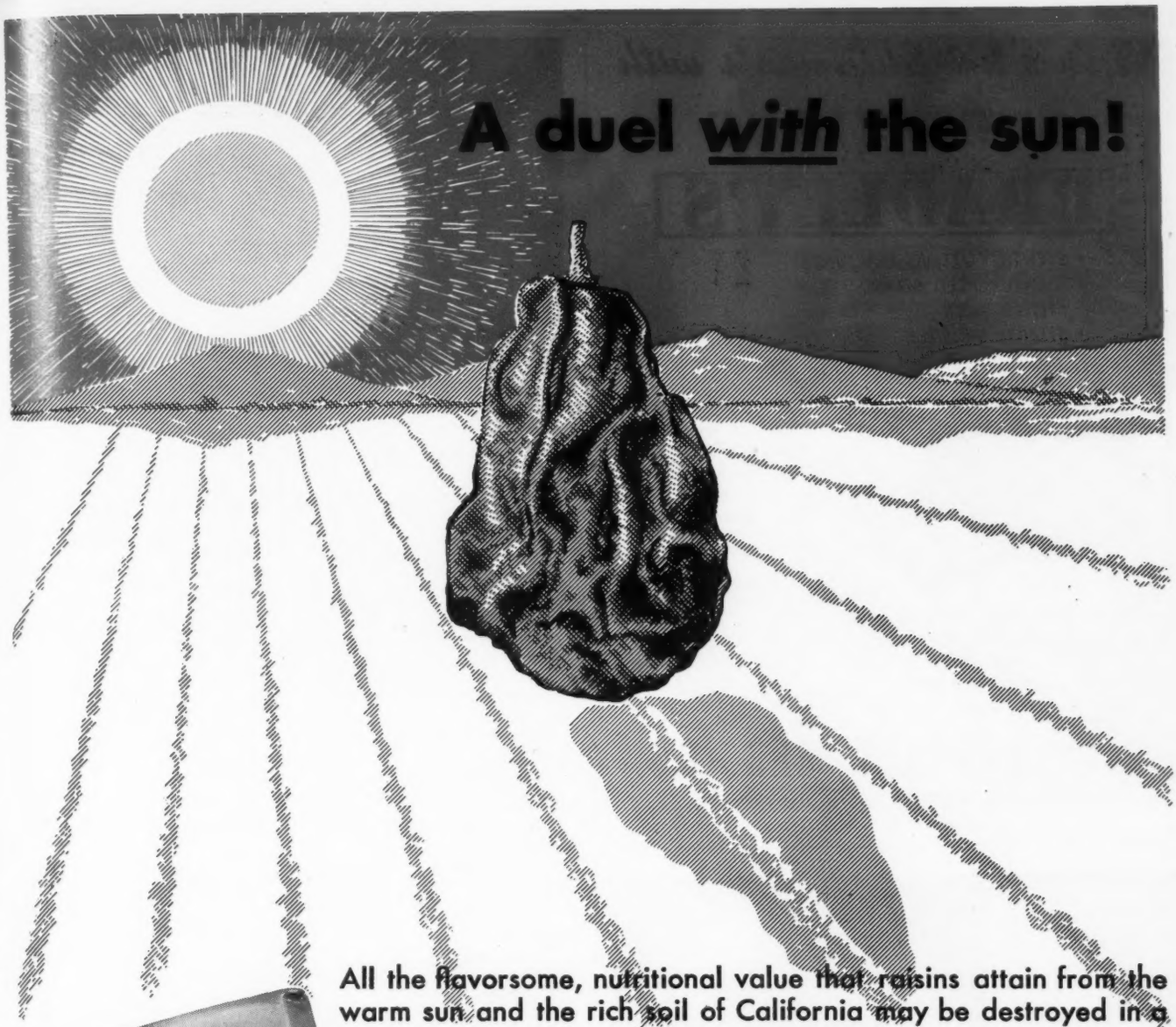
Consult Thomas L. Jefferson's complete package-engineering department for sound advice, individual attention. Write, phone Dept. M-2.

THOMAS L. JEFFERSON
AND ASSOCIATES
509 Fifth Avenue · New York, N. Y.
Telephone VA 6-0890

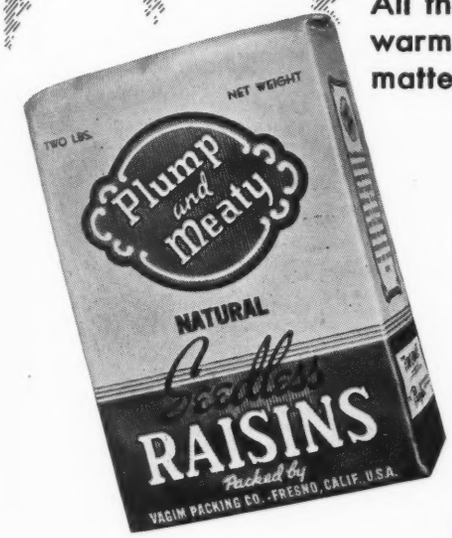
Custom Closures

Tailored in style and material for your problem package. Plastic . . . metal-plated plastic . . . metal . . . or combination closures . . . produced in large or small quantities.

FRANK J. SUTPHEN
• • • CENTRAL 3242 • • •
185 N. WABASH AVE. • CHICAGO 1, ILL.



All the flavorsome, nutritional value that raisins attain from the warm sun and the rich soil of California may be destroyed in a matter of weeks by ordinary packaging.



How then to pack this delicate food? Our analytical staff studied this problem and came up with the solution! Result—a package for raisins (and other similar fruits) that assures the original orchard freshness, tasty flavor and meaty softness—as the day they were packed.

The Vagim Packing Co., Fresno, Calif., after packing some 2,000 tons of raisins in Royal FLAV-O-TAINERS, state that upon examination after 10 months in a FLAV-O-TAINER there was no loss of weight, no loss of flavor, no sugaring and no spoilage: the raisins were totally unaffected by climatic conditions, and required no cold storage at any time! This means that FLAV-O-TAINER *will* give "Shelf-Life" to *your* package!

Solving difficult packaging problems is our business. We're confident we can offer a satisfactory (and economical) solution to yours!
Call upon the Royal office nearest you, today!

THOMAS M Royal COMPANY

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NEW ORLEANS BRYN MAWR
SYRACUSE WASHINGTON, D. C. ST. LOUIS
In England: E. S. and A. Robinson, Ltd. Bristol

SEATTLE NEW YORK BEAUMONT
ATLANTA DAYTON DETROIT
DENVER BOSTON CHICAGO
In South Africa: Modern Packaging (PTY) Johnannesburg

5801 N. SEVENTH STREET
PHILADELPHIA 20, PENNA.
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STENCILING

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STENCILING YOUR SHIPMENTS WILL IMPROVE THEIR APPEARANCE AND SPEED DELIVERY.

We can furnish a machine to meet every requirement sizes 1/2" to 1 3/4" letters.

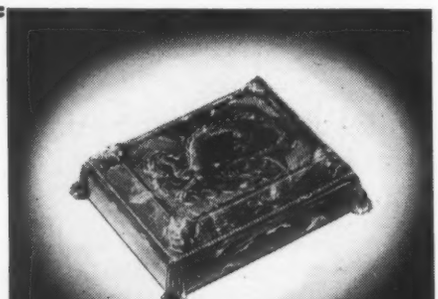
BRADLEY'S 5 IN 1 STENCIL INK IS INSTANT DRYING — NON-SETTLING. PROVIDES SHARP, CLEAR ADDRESSES ON CARTONS, CASES, ETC.

A. J. BRADLEY MFG. CO.

43rd Ave. & 9th St., L. I. City 1, N. Y.

SERVING YOU SINCE 1896

Meet the box



that will sell your PRODUCT

Plastic, covered Cardboard and Metal Boxes out of stock or made to order.

Cardboard boxes made to your individual requirements in quantities of 10,000 or more.

Stock jewelry boxes in quantities of 1,000 up.

Additional information upon request.

BUY DIRECT FROM OUR FACTORIES

Harkin Affiliates, Inc.

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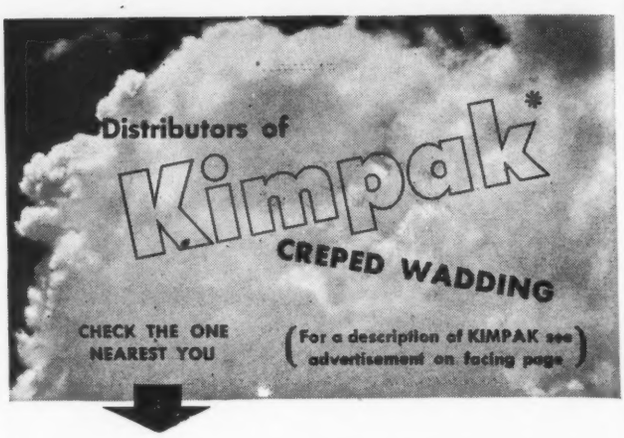
Distributors of
Kimpak*
CREPED WADDING
CHECK THE ONE NEAREST YOU
(For a description of KIMPAK see advertisement on facing page)

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Graham Paper Co.....Birmingham

ARIZONA
Graham Paper Co.....Phoenix

CALIFORNIA
Zellerbach Paper Co.....Fresno, Los Angeles, Oakland, Sacramento, San Diego, San Francisco, San Jose, Stockton

COLORADO
Carpenter Paper Co.....Denver
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CONNECTICUT
Charles F. Hubbs.....Bridgeport
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Graham Paper Co.....Atlanta

ILLINOIS
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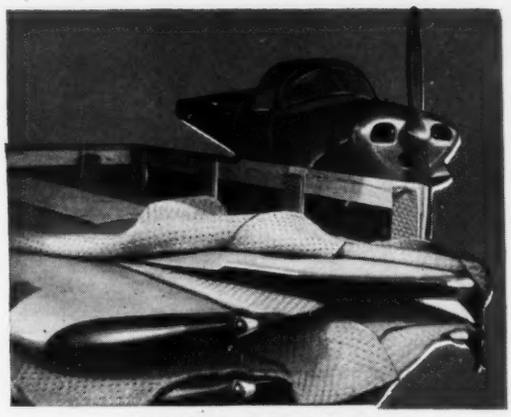
**KIMPAK (trade-mark) means Kimberly-Clark Creped Wadding*

KIMBERLY-CLARK CORPORATION

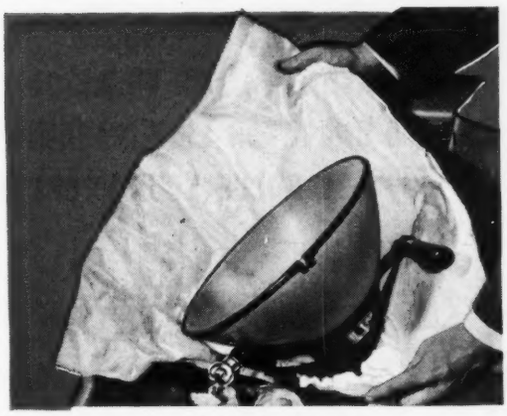
Neenah, Wisconsin

122 E. 42nd St., New York 17 • 8 S. Michigan Ave., Chicago 3
155 Sansome St., San Francisco 4 • 22 Marietta St., Atlanta 3, Ga.

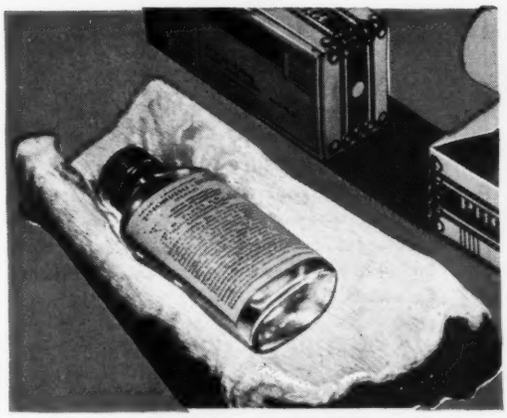


BLOCKING AND BRACING
Photo courtesy Engineering and Research Corporation

FLOTATION PACKAGING
Photo courtesy Chas. A. Stevens & Co.



SURFACE PROTECTION
Photo courtesy Pelton & Crane Co.



ABSORBENT PACKAGING
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Protects your product, improves your shipping package

Like a crown on a cushion, your product goes safely to market when you package it with resilient, attractive KIMPAK*. This is true whatever you manufacture—whether it's as rugged as a refrigerator or as fragile as a flashlight bulb. For KIMPAK is designed to do a *surer* job in all Four Basic Methods of Interior Packaging—Surface Protection . . . Flotation Packaging . . . Absorbent Packaging . . . or Blocking and Bracing. In every method, it gives you the advantages of a clean, flexible, highly-efficient cushion.

Whatever qualities you require in an interior packaging material—softness, strength, moisture absorption or repellence, cushion, ease of handling—you'll discover them in KIMPAK. Find out how to suit low-cost KIMPAK to your specific problem. Call the local distributor of packaging or shipping materials (listed in the phone book) or write to Kimberly-Clark Corporation, Creped Wadding Division, Neenah, Wisconsin.

We are producing all the KIMPAK Creped Wadding we possibly can, but due to the great demand, your distributor may have some difficulty in supplying you immediately.

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CREPED WADDING

*KIMPAK (*trademark*) means Kimberly-Clark Creped Wadding.*

Cost's *DECREASE...*

with "SELECTIVE SPEED" *in* Metered Packaging

Frozen Foods, Candies, Nuts, Popcorn, Chemicals, Spices, Food Products, Seeds, etc.

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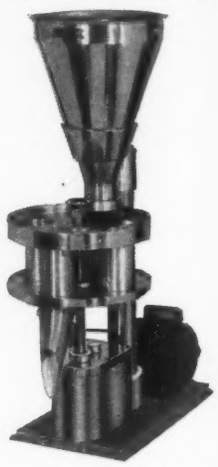
* **SPEE-DEE** Filling Machines prove it again and again. Companies who use them obtain

GREATER ACCURACY • INCREASED PRODUCTION
MORE EFFICIENCY • ADDITIONAL PROFITS

With Spee-Dee Filling Machines speeds may be selected up to 72 packages per minute—and still maintain exact net weight. Coarse or fine material can be metered in quantities from a fraction of an ounce to 5 pounds.



Represented by:
Wrap-Ade Machine Co., New York: Globe Manufacturing Co., Philadelphia: Peter D. Bowley & Assoc., San Francisco

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Also distributors of Poppers, Conveyors, Graders, Wrap Ade, Heat Sealers and Felins Pak-Tyer

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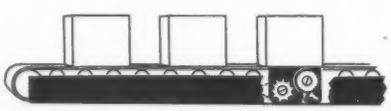
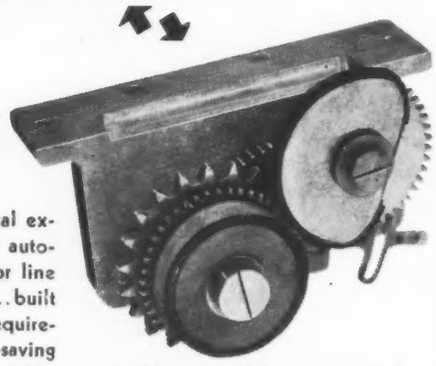
WE HAVE IT . . . OR WE'LL BUILD IT . . . A CONVEYOR LINE MARKING UNIT TO SOLVE YOUR PROBLEM





Here's a typical example of our automatic conveyor line marking units... built to specific requirements... time-saving adjustment for inking . . . quickly removable printing and inking rolls . . . uses the convenient, efficient, fool-proof Base-Lock Rubber Type.

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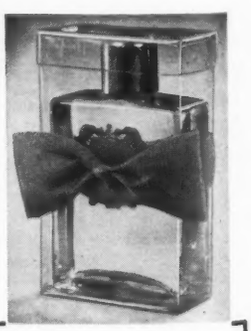
ADD THE TOUCH OF LUXURY TO YOUR PACKAGE WITH RIBBON BOWS BY ROSEBUD

A quality product calls for a quality package. You can give your package a unique, luxurious touch with a colorful ribbon bow. Rosebud offers a large selection of beautiful ribbons and bows in all colors and materials. Or if you prefer, we will create a bow to suit your package.



ROSEBUD MFG. CO.

874 Broadway, New York, N. Y.

REDUCE down time of presses

IMPROVE printing quality

SEE IT AT
BOOTH 30

Keep your presses running while you Mount and Prove Rubber Plates on the MOSSTYPE MOUNTING and PROVING MACHINE

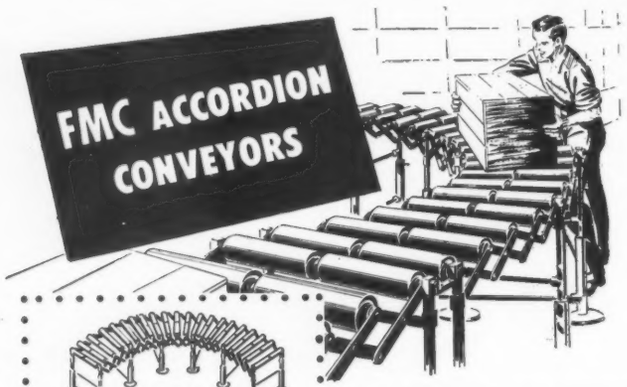
You lose valuable productive time when you tie up presses to mount and color-prove rubber plates. But, with the MOSSTYPE MOUNTING and PROVING MACHINE, you save time and manpower by performing make-ready operations *independently of the press!* And you insure better printing results because of the finer adjustments and more accurate plate-mounting it makes possible. Also, there is no danger of scarring or distorting plates when you use the MOUNTING and PROVING MACHINE.

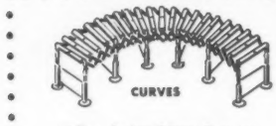
A precision-engineered unit, the MOUNTING and PROVING MACHINE can be operated efficiently by the average aniline press operator. Cylinder is placed in machine . . . plate mounted on the cylinder . . . proofs pulled . . . necessary make-ready performed. No adjustments are required for progressive color-proving after initial setting. When mounting is completed cylinders are ready to print . . . *in register.*

The MOUNTING and PROVING MACHINE makes it easy to check for cylinder concentricity and plate uniformity. It can also be used for mounting plates to tympan sheets of press cylinders with ratchet rewinds. The machine is designed for all diameters and lengths of cylinders and shafts.

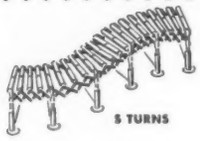
Write today for complete information about the MOSSTYPE MOUNTING and PROVING MACHINE.

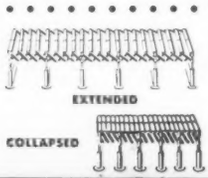
MOSSTYPE CORPORATION
33 Flatbush Avenue
BROOKLYN 17, NEW YORK
RUBBER PLATES • RUBBER DESIGN ROLLERS





Roller design keeps box on conveyor regardless of curves





An ideal answer to any package handling problem

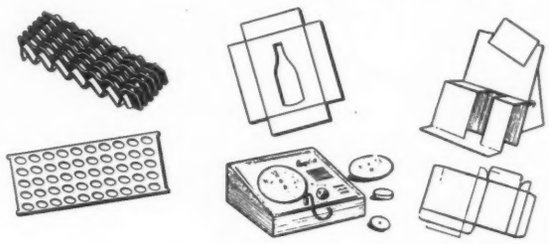
Wherever materials must be handled, set up one or more sections of this sturdy, flexible, and efficient conveyor in a few minutes. Save time, space, and labor... reduce handling costs. Ends "aisle-jamming," because it eliminates need for trucks and dollies. Collapsible, spring steel side frames, roller capacity 80 lbs. each. 60" and 100" lengths, various roller widths. For free literature on FMC standard and accordion conveyors, address Dept. P.

FOOD MACHINERY CORPORATION
RIVERSIDE DIVISION RIVERSIDE, CALIFORNIA

GOOD DIECUTTING and EMBOSSING = A GOOD IMPRESSION

Lansky has been diecutting paper, cardboard, rubber, sheet plastics, thin metals and Tek-wood for over twenty years.

That's why you can be sure that we will do a good job—that your product or display will make a good impression. Specializing in heavy diecutting and handsome, high-relief embossing, we offer our unique facilities at reasonable cost.



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BOX PRINTING PLASTICS
RADIO TOYS LEATHER GOODS
ADVERTISING ELECTRICAL

For complete information, see

LANSKY DIECUTTING CO.
196 GREENE STREET NEW YORK 12, N. Y.

STEEL RULE DIES • DIECUTTING • EMBOSSING • DISPLAY MOUNTING • FINISHING

This is the actual size of the Canco Frozen Foods Container

NEW—a specially designed frozen foods container

• The Canco Frozen Foods Container for fruits and vegetables is made of one piece virgin pulp fiber with metal ends.

It eliminates hand labor in filling and closing. Makes high-speed production possible — with resulting low costs.

It eliminates labeling and large capital investment in labeling machinery.

It eliminates inner bags, liners, and outer wrappings . . . makes a more attractive package.

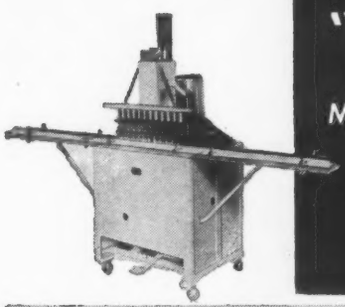
The Canco Frozen Foods Container is . . .

Liquid Tight
Moisture—vapor resistant
Strong • Easily Opened • Sanitary

CANCO FROZEN FOODS CONTAINER

AMERICAN CAN COMPANY (CANCO) New York • Chicago • San Francisco

Look for the New Canco Frozen Foods Container at the National Association of Frozen Foods Packers Exposition in San Francisco . . . March 19 to 21. Booth 302-303.



The New

"ESA"

MULTIPLE SPOUT

VACUUM BOTTLE FILLER

EASILY ADJUSTED NO DRIP SPOUTS

ALLOWS OPERATOR USE OF BOTH HANDS

TOTALLY ENCLOSED MOTOR UNITS

Here's the answer to your bottle filling requirements. The Ertel ESA, in the low price field, will fill bottles accurately and economically. Write for full information on this quality-engineered Ertel unit.

TWO *Quality* VACUUM BOTTLE FILLERS

ON DISPLAY AT THE

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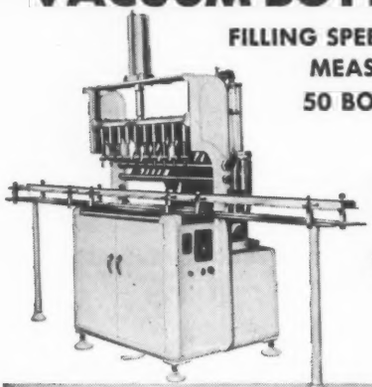
DON'T MISS THE ERTEL BOOTH

"Pneumo-Vac" VACUUM BOTTLE FILLER



FILLING SPEED MEASURED IN QUARTS— 50 BOTTLES PER MINUTE

ERTEL LIQUID HANDLING EQUIPMENT

The "Pneumo-Vac" is operated by a balanced foot valve which allows the operator full use of both hands and reduces physical effort to a minimum. Drippage is positively prevented while unit is in operation. Liquid filling heights, for 3" to 13" bottles, can be quickly regulated. Illustrated "Pneumo-Vac" bulletin gives full information. Write for your copy.

ERTEL ENGINEERING CORPORATION

KINGSTON NEW YORK

NEW YORK CITY SALES OFFICE AND SHOWROOM
40 WEST 48th STREET, NEW YORK 19, N. Y.

TUBULAR *Paper* PACKAGES

Tubular Paper Packages have very wide use under present post-war conditions. They are sturdy, lightweight, and can be attractively decorated in a wide range of colors.

DIAMETERS: 6" TO 2½" IN ANY LENGTHS

Ask for Quotations

DIAMOND STRAW & MACHINE CO

32-36 WEST NEW YORK 11 — DIAMOND — 18th STREET N. Y.

Fine Display Settings An Essential Part of Modern Packaging!

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Window or counter display created for Speidel Company

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For Leadership at "Point of Sale"

36 pages . . . 420 pictures . . . an exhibit of performance. Write for a copy of it today on your business letterhead.

May We Suggest . . .

Now is the time to employ our counsel and services to insure best acceptance, maximum use, consistent results. We are a Display Agency and cooperate fully with your advertising agency to "Pipe-in" the force of national advertising.

America's Largest Organization Specializing in Merchandise Presentation

W. L. STENSGAARD AND ASSOCIATES, INC.

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our Exhibit
At the
PACKAGING EXPOSITION
CONVENTION HALL
Philadelphia
April 8, 9, 10, 11

Decorators on Glass and Plastic Containers Since 1936
●
4 Colors in One Operation —Finest Detail

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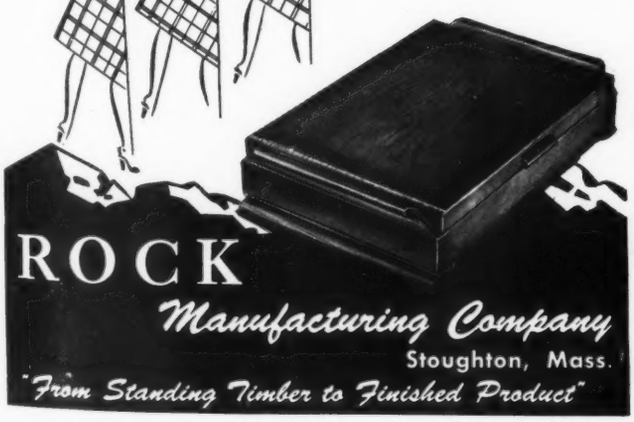
They go for your product

when it's in a wooden chest, box or display case by ROCK. Boxes by ROCK are beautifully designed, sturdily built. Specializing in the design and manufacture of silverware chests, jewelry and display cases for many years has made our name synonymous with fine wood containers.

You will find ROCK containers ideally suitable for your product.



ROCK
Manufacturing Company
Stoughton, Mass.
"From Standing Timber to Finished Product"

another
"SHOPPER STOPPER"
by Braun

BALM BARR, the "creme-whipped" hand lotion, required a "bottle-jar"—graceful as a bottle, functional as a jar. Result: a beautifully squat bottle that's instant identification for Balm Barr the country over. BRAUN packaging can help you, too.

W. BRAUN CO.
304 N. CANAL ST. • CHICAGO 6, ILL.
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TUBES and CONTAINERS
FOR EVERY PURPOSE

We manufacture paper cores, mailing tubes, ribbon blocks, spools, paper boxes and cans with metal ends, curled ends, paper cap ends. Noted for fast production—any length, diameter, wall. Containers developed.

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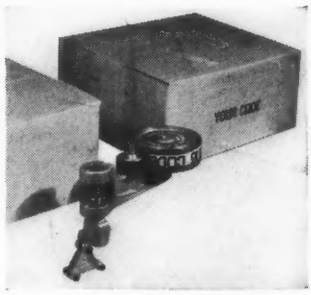
FACTORIES: LOWELL, MASS. • AUGUSTA, ME.

MARKS CASES *in Motion* AUTOMATICALLY!

NEW IMPROVED ROLACODER 100 IMPRINTS CARTONS OR DRUMS MOVING ON CONVEYOR LINE



- Eliminate time and labor costs from case-marking operations! Rolacoder 100 makes clean, precise imprint of code dates, lot numbers, content information on cases, crates, cartons, kegs or drums . . . without slowing travel on conveyor. Maximum length of imprint: 12 inches.
- Rolacoder 100 is friction-operated . . . requires no outside power source. May be installed quickly, easily on conveyor, packaging or sealing machine.
- Write today for complete details . . . and state your specific marking requirements.

Consult Gottscho about *any* marking problem.

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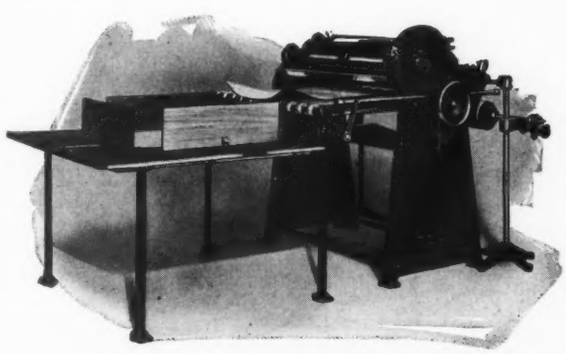

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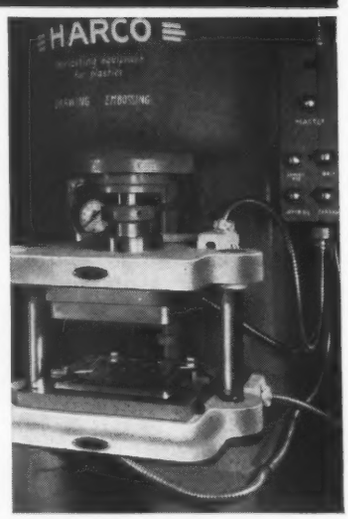

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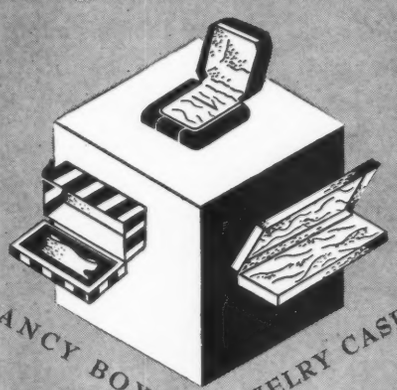

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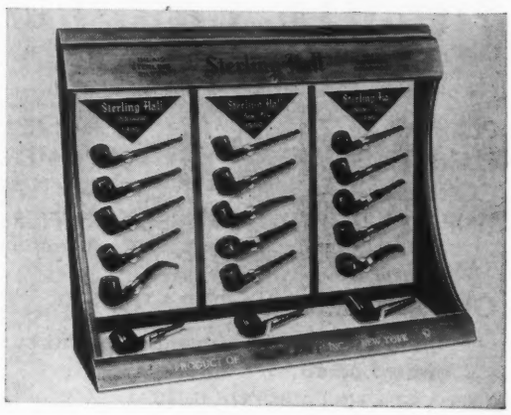

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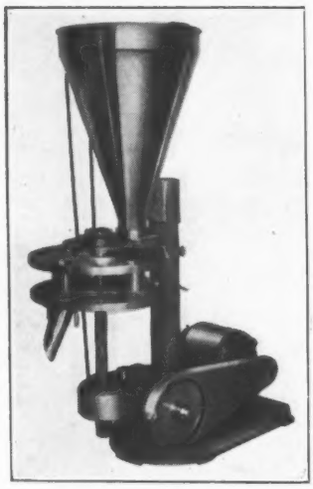

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Fills tiniest containers up to 6 ounces with powders, nuts, crystals, candy, seeds, spices, noodles, etc. Accuracy within 1/32 to 1/16 ounce. Weight 100 lbs.

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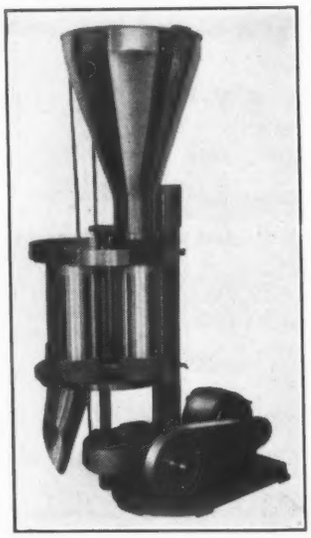

BENCH MODEL B-2 (not illustrated). Fills smallest containers up to 2 lbs. with candy, peanuts, beans, coffee, unpopped corn, spices, seeds, powders, etc. Accuracy within 1/32 to 1/8 ounce. Weight 115 lbs.

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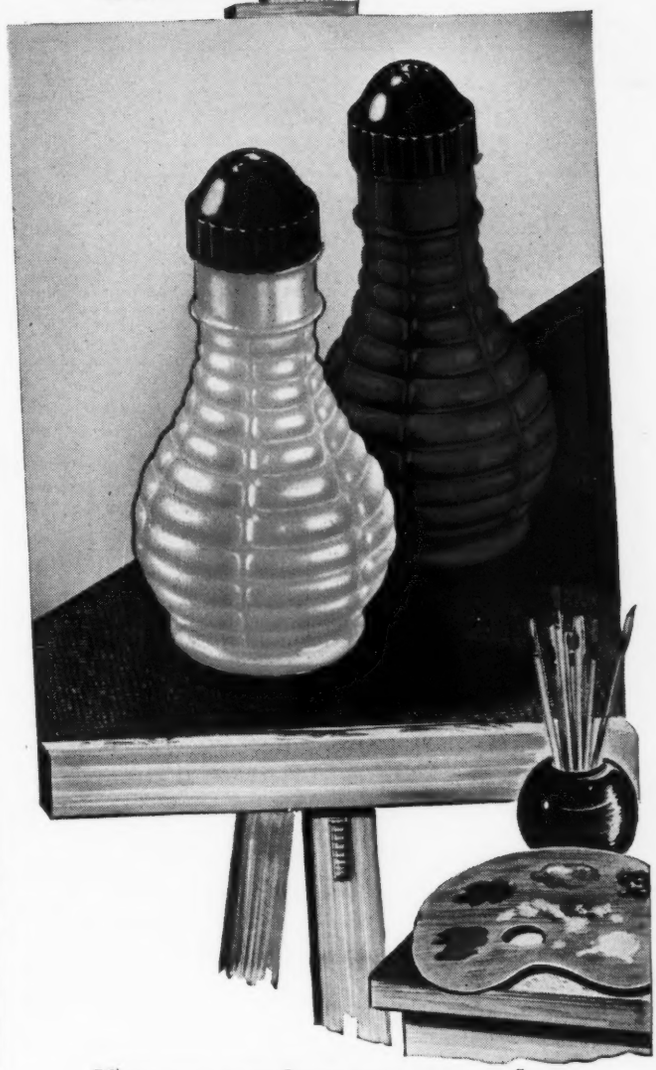

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(Please turn to page 296)

WOMEN VOTE 4 TO 1 FOR FOOD BEVERAGES IN GLASS CONTAINERS!

Housewives prefer a container in which they can store leftover portions safely . . . conveniently!

Their emphatic preference for food beverages in glass is but one example of their sweeping vote for glassed foods as established in nation-wide surveys of representative products* by a well-known public opinion analyst.**

The growing trend is to glass for modern packaging because of these basic glass advantages:

VISIBILITY:

A top preference—your customers see what they buy! Food itself looks tastier than pictures of food. That's appetite appeal—the strongest buying urge!

PROTECTION:

Glass leaves flavor alone—adds no taste. Food is cooked in its own sanitary glass container, assuring customers full, fresh flavor, absolute cleanliness.

CONVENIENCE:

Easy-to-open—easy-to-reseal. Left-overs are safely, compactly stored in the original jars. Complete visibility tells customers when to buy more.

ATTRACTIVENESS:

Glass-bright displays are eye-inspiring, invite their purchase. These modern containers add color and a spick-and-span sparkle to pantry shelves.

The popularity of glass containers is growing . . . growing because their many advantages are basic. You sell more—need less selling time with products packed in glass—in Duraglas Containers!

*Average is based on eight key classifications: pears, peaches, fruit salad and cocktail, baby food, coffee, salad or cooking oil, beets, food beverages.
**Name supplied on request.

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★ Preserves fresh, true flavor
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★ Easy to grip firmly
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